

**STAFF REPORT ON
INVESTIGATION CONCERNING COMPETITIVE LOCAL CARRIERS'
DEPLOYMENT OF FACILITIES**

**Prepared for Submission to the
Federal Communications Commission
October 4, 2004**

**Prepared by the Staff of the
California Public Utilities Commission
Administrative Law Judge Division
Telecommunications Division**

**505 Van Ness Avenue
San Francisco, California 94102**

TABLE OF CONTENTS

I.	Introduction and Background	4
II.	Mass Market Switching Deployment.....	10
A.	Background	10
B.	Definition of the Market for Mass Market Switch Deployment.....	12
1.	Background	12
2.	Parties' Proposals Concerning Market Definition	13
a)	Metropolitan Statistical Area (MSA).....	13
b)	UNE Loop Density Zone	15
c)	Local Exchange Area.....	17
d)	Wire Center	18
3.	Conclusions of the Staff Concerning Market Definition	18
a)	Summary	18
b)	The Wire Center Best Distinguishes Where Customers Are Served.....	21
	(1) Mass Market Customer Distribution in SBC Incumbent Territory	21
	(2) Mass Market Customer Distribution in Verizon's Territory	26
c)	Scale Economies Relationship to Market Size	28
d)	Variations in Collocation Deployment as an Indicator of Market Definition	30
e)	Geographic Reach of the Switch Does Not Determine Market Definition	32
f)	MSA Market Definition Presumes "De Facto" Potential Deployment	34
g)	Multiple Markets Versus A Single Market.....	36
h)	Reach of Mass Media Advertising.....	37
i)	Retail Pricing Patterns As An Indicator of Market Definition	38
j)	SBC Customer Distribution Data are Inconclusive	39
	(1) Ported Numbers	39
	(2) NXX Code Assignments.....	41
	(3) Collocation as an Indicator of CLEC Customer Distribution	41
C.	Cross-Over Demarcation of the Mass Market: Number of Lines Served.....	42
1.	Background	42
2.	Parties' positions.....	43
3.	Conclusion of the Staff	48
4.	DS-0 Cutover Proposal of Verizon.....	50
5.	Conclusion	52
D.	Examination of Mass Market Deployment of Self-Provisioned Switching.....	52
1.	Background	52
2.	SBC's Mass Market Trigger Deployment Showing	53
3.	Position of CLECs on SBC Mass Market Trigger Showing	55
a)	Reliability of Data Used in Trigger Deployment Analysis.....	55
b)	Screening Standards Applicable to Trigger Candidates	56

4.	Conclusions of the Staff Concerning Mass Market Switching Deployment	61
a)	Applicability of Screening Criteria	61
b)	Review of Mass Market Switching Deployment Data by Region	66
c)	Review of Individual Candidates Claimed to Meet Trigger Criteria	70
d)	Principles Underlying Adopting Screens Applied to Trigger Candidates	73
	(1) Carriers Not Serving Residential Customers	73
	(2) Serving More Than a De Minimis Market Share	76
	(3) Cable Telephony Providers as Trigger Candidates	80
	(4) Switches owned or operated by ILECs or their affiliates.	83
5.	Verizon's Mass Market Trigger Case	84
a)	Position of Verizon	84
b)	Opposing Parties' Response to Verizon's Trigger Case	86
c)	Conclusions of the Staff Concerning Mass Market Switching Deployment in Verizon's Service Territory	89
d)	Adopted Trigger Screens Applied to Verizon Trigger Candidates	90
III.	Loops and Transport Impairment Issues	93
A.	Overview and Background	93
B.	High Capacity Loop Deployment Analysis Framework	95
1.	SBC's Loops Triggers Case	98
a)	Overview of Parties' Positions	98
b)	Discussion of Specific Disputes Regarding Loop Trigger Application	100
	(1) Carrier Hotels Misclassified as Customer Premises	100
	(2) Inferences from Incomplete Data	101
	(3) Capacity-Specific Requirements for Loop Triggers	102
	(4) Requirement for Access to Every Customer at Customer Location	105
	(5) Operational Readiness	106
	(6) Offering Service on a Widely Available Basis	108
	(7) Requirement for Wholesaler to Offer Cost-Based Rates	109
c)	Conclusion	110
2.	SBC's Potential Deployment Analysis for High Capacity Loops	111
a)	Positions of Parties	111
b)	Issues in Dispute Regarding SBC Potential Deployment Analysis of Loops	113
	(1) Lack of Location-Specific Analysis	113
	(2) SBC Construction Cost Estimates Underlying Potential Deployment Analysis	116
	(3) Validity of Estimates of Available Revenue Per Carrier	117
c)	Conclusions Regarding SBC's Potential Deployment Case for Loops	121
3.	Verizon's Self-Provisioning Trigger Case for Loop Deployment	123
a)	Overview of Verizon's Case	123
b)	Position of CLEC Parties Regarding Verizon Loop Trigger Case	123
c)	Dedicated Transport Impairment Framework	124
	(1) Overview	124

C.	Dedicated Transport.....	127
1.	SBC’s Transport Triggers	127
a)	SBC’s Transport Self-Provisioning Trigger Case.....	127
b)	SBC Wholesale Trigger Case for Transport	128
c)	SBC Potential Deployment Analysis for Transport Routes.....	129
2.	Verizon’s Transport Trigger Case	129
a)	Discussion of Specific Disputes Regarding Transport Triggers.....	131
b)	Capacity-Specific Identification of Triggers	134
c)	Dark Fiber Capacity	136
d)	Characterization of Entrance Facilities as “Dedicated Transport”	138
e)	Operational Readiness: Transport Case	141
f)	CalTel’s Response to Verizon’s Transport Case	142
g)	Conclusions.....	143

I. Introduction and Background

This report presents a summary of the record and resulting analysis conducted by the Staff of the California Public Utilities Commission (Staff)¹ pursuant to the Federal Communications Commission (FCC) Triennial Review Order (TRO), adopted on February 20, 2003,² concerning the extent of competitive local exchange carriers (CLEC) deployment of designated facilities within markets in California.

Specifically, this report analyzes CLEC deployment of the following network elements: mass market local circuit switching, high capacity loops, and dedicated transport routes. The findings presented rely upon the record that was developed through data collection, testimony, and evidentiary hearings held in the proceeding. The TRO set forth federal mandates for state commissions to conduct investigations to identify those markets, if any, in which CLECs satisfy certain prescribed criteria (characterized as “triggers”) relating to the deployment of specified facilities.

Under its original mandate, the TRO required the gathering of factual evidence necessary to make findings concerning markets where the deployment trigger criteria were met. In such markets, state commissions were directed to

¹ As used herein, the term “Staff” has reference to the members of the team assigned by the Administrative Law Judge Division and the Telecommunications Division to the TRO proceeding.

² Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers (CC Docket No. 01-338); Implementation of the Local Competition Provisions of the Telecommunications Act of 1996 (CC Docket No. 96-989); Deployment of Wireline Services Offering Advanced Telecommunications Capability (CC Docket No. 98-147), FCC No. 03-36, ¶ 669 (rel. Aug. 21, 2003) (hereinafter, “TRO”).

make findings that competitors are not impaired without access to designated unbundled network elements (UNEs), and the ILEC was to be relieved of its

obligations to make the designated network elements available to competitors on an unbundled basis.

Pursuant to a prehearing conference on September 30, 2003, by rulings dated October 8, and October 20, 2003, the TRO proceeding was segmented into three major issue areas, with evidentiary hearings held on a consolidated basis. These three areas were (1) mass market switching deployment analysis, (2) high-capacity loops and dedicated transport deployment analysis, and (3) development of batch hot cut processes and pricing. The first two areas are the subject of this report. The third area is the subject of a Proposed Decision of the ALJ that is currently pending on the Commission's agenda. In response to a standardized questionnaire prepared by the Commission staff, carriers throughout California submitted pertinent data necessary to conduct the analysis.³ Responsive data were provided to the Commission, and in turn, was made available to parties in accordance with the provisions of an adopted protective order, restricting public disclosure of confidential data. In addition to the data collected through the Commission's own discovery, parties independently engaged in discovery, where warranted, to supplement the Commission's standardized discovery questionnaire. The data that was utilized and relied upon for the findings contained in this report is thus made up of both carrier data provided directly to the Commission and independent data provided by parties participating in this proceeding. Evidentiary hearings began

³ A copy of the data solicited through the standardized questionnaire is set forth in Appendix 5 to this report.

on January 26, 2004 and continued through February 27, 2004. Opening briefs were filed on April 12, 2004, and reply briefs were filed on May 13, 2004.

The active parties in the proceeding included the two ILECs: Pacific Bell Telephone Company, doing business as SBC California (SBC), and Verizon California Inc. (Verizon). The CLECs were principally represented by AT&T Communications of California, Inc. (AT&T), MCI, Sprint, Covad Communications (Covad), the Pure UNE-P Coalition, Allegience, and CalTel. Consumer interests were represented by the Commission's Office of Ratepayer Advocates (ORA), and The Utility Reform Network (TURN).

On March 2, 2004, the United States Court of Appeals for the District of Columbia Circuit issued an opinion in *United States Telecom Association v. Federal Communications Commission*, No. 00-1012 (*USTA II*). *USTA II* vacated provisions of the TRO relating to the delegation of authority to determine where CLECs are not impaired without access to unbundled elements and the substantive tests that the FCC promulgated for making such determinations. The D.C. Circuit temporarily stayed its mandate at the request of the FCC. On June 15, 2004, however, the stay expired and on June 16, 2004 the District Court's *vacatur* order became effective. On June 18, 2004, an Assigned Commissioner's Ruling was issued, suspending California TRO proceedings, and setting aside submission, until such time as the FCC issues new or interim local competition rules.⁴

Since the TRO provisions concerning state delegation have been vacated and submission of this proceeding set aside, we make no findings herein as to whether or in what markets competitors are not impaired without access to specified UNEs. Nonetheless, in its most recent Order and Notice of Proposed

⁴ Although certain parties (including this Commission) have appealed the DC Circuit opinion to the U.S. Supreme Court, it is uncertain whether the Court will hear the matter or, if so, to what extent they will ultimately uphold or deny the appeal.

Rulemaking (NPRM) on alternative unbundling rules, issued on August 21, 2004, the FCC expressly encouraged state commissions to file summaries of their state TRO proceedings. In the NPRM, the FCC states:

“Given that our inquiry raises complex issues, and proceedings that state commissions initiated to implement the TRO developed voluminous records containing information potentially relevant to our inquiry, we anticipate that parties may wish to submit much of that same factual evidence to support their positions here. . . To make records from state proceedings more usable, we encourage state commissions and other parties to file summaries of the state proceedings, especially highlighting factual information that would be relevant under the guidance of USTA II.” (NPRM ¶ 15.)

In accordance with the FCC NPRM, therefore, we provide this summary of the proceeding. An extensive record has been developed through discovery, testimony, hearings, and briefing of the relevant factual issues. Whatever rules are ultimately adopted, the factual analysis of the record that has been developed in this proceeding is provided for the use of the FCC in its formulation of rules and policies on network unbundling.

In brief, the Staff reached the following conclusions as to competitors’ deployment of local circuit switching in the mass market by deploying their own local circuit switching facilities, while still leasing the UNE loop (UNE-L) from the ILEC.

- 1 The wire center is the most appropriate geographic market definition for analysis of mass-market CLEC UNE-L switching deployment. The wire center provides a more precise profile of deployment, while accounting for relevant economies of scale, in comparison to defining the market by larger geographic units.

- 2 For purposes of distinguishing the mass market from “enterprise” customers in terms of number of lines served, Staff applies the following criterion. Staff distinguishes the mass market as consisting of all customers utilizing less than 15 lines per location at a Digital Signal (DS)-0 capacity, applied on a statewide basis. Staff treats as enterprise customers those that utilize greater than 15 lines per location.
- 3 Mass market CLEC switch-based deployment is appropriately defined by screening out CLECs that fail to meet relevant criteria that signify that the mass market is actually being served. The screens that Staff applies to determine if a UNE-L provider is providing mass-market switching require that the carrier: (a) provide a minimum of five mass market loops, (b) actively provide residential service, (3) is not a cable television provider, and (4) serve greater than 1% of the defined market.
- 4 Using the above definitions and approaches, Staff concludes that there are no markets (defined by wire centers) that contain at least three CLECs with self-deployed switches providing UNE-L mass-market service. Our finding would also apply even if an MSA market definition were used instead of the wire center definition.

Staff’s investigation of high capacity loops and dedicated transport deployment looked at those customer locations, if any, (in the case of high capacity loops) or routes (in the case of dedicated transport) deployed by CLECs in accordance with the criteria set forth in the TRO. Since the FCC has already defined the relevant market for deployment of high capacity loops as applicable to each specific customer location, the staff did not need to perform a separate analysis of market definition, as for mass market switching. Likewise, in the case of dedicated transport, the FCC has already defined the relevant market for trigger analysis as applicable to each specific dedicated transport route.

In analyzing customer loops and transport routes, Staff applied various criteria to identify the extent of CLEC deployment on a self-provisioning or

wholesale basis, as well as with respect to potential deployment, in accordance with the TRO. These criteria included:

1. Whether loop/route with capacity at an “Optical Carrier (OC) “n” level should qualify that loop/route as being deployed at a Digital Signal (DS)-1 and DS-3 level of capacity.
2. Whether a CLEC that is present at a given location or on a given route is affiliated with the ILEC or with another CLEC that is present at the same location or route.
3. Whether the CLEC has access to every customer at that location or on that route.
4. Whether the CLEC offers its service on a widely available basis.
5. Whether the CLEC actually serves at the identified location or on the designated route.
6. Whether the CLEC offers service at cost-based rates and reasonable, nondiscriminatory terms and conditions.
7. Whether the CLEC is operationally ready and capable of providing service on a widely available basis.
8. Whether the identified location is actually a “carrier hotel” rather than a true location of a customer loop.

The Staff concludes that after applying the appropriate screening criteria, the self-provisioning trigger for high capacity loop deployment is satisfied at only two customer locations within the SBC service territory for DS-3 loops and at four locations for dark fiber. Staff concludes that the self-provisioning trigger has not been met at any of the customer locations claimed by Verizon, and that only two carriers confirmed the deployment of DS3 circuits serving the specific customer location. In both cases, the number of DS3 circuits serving the customer location exceeded the 2 DS3 level.

Staff thus concludes that no customer locations satisfy the wholesale loop trigger within the SBC territory, and that no locations within the Verizon territory satisfy the wholesale loop trigger. Based on the record, Staff concludes

that no route meets the requirements for any of the dedicated transport route triggers at any of the TRO-designated capacity levels, either in the SBC or the Verizon territory. Lastly, the staff concludes that the potential deployment case presented by SBC lacked the granularity required by the TRO, and that no loop location or transport route meets the requirements for potential deployment.

II. Mass Market Switching Deployment

A. Background

This section summarizes the record that was developed concerning the extent to which competitors have deployed local circuit switching facilities to serve mass market customers (*i.e.*, residential and very small business customers served over analog lines operating below the Digital Signal (DS) 1 capacity level). *TRO* ¶ 459.⁵ Opening testimony on mass market switching issues was mailed on December 12, 2003, and reply testimony on January 16, 2004. Supplemental testimony was presented to provide comparable trigger analysis applying alternative market definitions.

As a framework for understanding how the data on CLEC switch deployment were compiled and evaluated, it is useful to review the TRO provisions that governed the collection and analysis of switch-based deployment data. As the first step, the TRO required a definition of the relevant geographic markets within which deployment levels are measured. Next, a review was conducted concerning the extent of mass market switch-based deployment in each

⁵ The FCC defines local circuit switching to encompass “line-side and trunk-side facilities, plus the features, functions and capabilities of the switch,” including “the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks.” In addition, “the features, functions, and capabilities of the local circuit switching UNE also include the same basic capabilities that are available to the incumbent LEC’s customers, such as telephone number, directory listing, dial tone, signaling, and access to 911, and in [certain] cases...operator services and directory assistance.” *TRO* ¶ 433

market by carriers that meet the criteria indicating that they serve the mass market with their own local circuit switch, as set forth in the TRO. Variations exist in the extent of switch-based deployment from one market to another. As a result, our findings concerning switch-based deployment of facilities are made on a market-specific basis.

As originally envisioned under the TRO, in those markets where the trigger criteria were satisfied, findings of non-impairment would be made, and the ILECs would be relieved of the obligation to offer local circuit switching on a UNE basis. Since the TRO rules have been vacated, however, no findings are made concerning whether carriers are impaired without access to the UNE Platform (UNE-P) as a result of the deployment analysis in this report. Instead, we limit the scope of analysis to the factual investigation concerning the extent of CLEC switch-based deployment to serve mass market customers. Because the reporting format for the investigation was organized in accordance with the trigger requirements, we report the factual results in data categories structured according to the trigger criteria.

The TRO prescribed explicit trigger tests as a basis for assessing the level of CLEC switch deployment in a given market. First, a “self-provisioning” trigger test identifies the number of carriers self-provisioning their own switches.⁶ The self-provisioning trigger is met in any market where three or more unaffiliated competing carriers serve mass market customers with the use of their own switches. *TRO* ¶ 501. The data were analyzed in terms of whether or not this trigger was satisfied for each relevant geographic market.

⁶ TRO, ¶ 501.

The “wholesale trigger” test identifies the number of wholesalers offering independent switch-based capacity to carriers.⁷ The competitive wholesale trigger is met in any market where two or more unaffiliated CLECs offer wholesale switching service for that market using their own switches. *TRO* ¶ 504. Since the ILECs did not present claims that the wholesale switching trigger was met, no findings are made herein concerning whether the wholesale trigger is met.

The trigger tests measure *actual* current deployment of competitive switching, but do not address the *potential* for CLECs to deploy their own switches in a given market where they are not already deployed. Thus, in markets where neither trigger test is met, the TRO calls for additional analysis of potential deployment as a basis to determine if a finding of no impairment is required in a given market.⁸

In the TRO proceeding, the ILECs presented a “triggers-only” case, with evidence only concerning actual CLEC self-deployment of switches. The ILECs declined to present evidence of “potential deployment” of switches in those markets where competitors do not already deploy switches to serve the mass market. Thus, our findings report only on actual competitive switch deployment, but not potential deployment.

B. Definition of the Market for Mass Market Switch Deployment

1. Background

CLEC deployment of switches is not uniform across all geographic regions, but varies from one market to another. Thus, in order to develop a nuanced profile of switch-based competition that takes into account such

⁷ TRO, ¶ 504.

⁸ The same market definition must be applied in both the trigger tests as well as the potential deployment analysis.

distinctions, switch-based deployment must be examined separately for each applicable geographic market. Therefore, the relevant geographic markets first must be defined. The FCC did not define specific geographic markets in the TRO, but set forth certain parameters, indicating that

“[s]tate commissions have discretion to determine the contours of each market, but they may not define the market as encompassing the entire state. Rather, state commissions must define each market on a granular level, and in doing so they must take into consideration the locations of customers actually being served (if any) by competitors, the variation in factors affecting competitors’ ability to serve each group of customers, and competitors’ ability to target and serve specific markets economically and efficiently using currently available technologies.” (TRO ¶ 495.)

Although the TRO rules concerning mass market switching have been vacated, the economic principles set forth therein concerning how markets are to be defined were addressed by parties in their testimony and formed part of the record in this proceeding. Accordingly, we make reference to provisions of the TRO in the context of reviewing the record and discussing our analysis of how the market for mass market UNE-L provisioning should be appropriately defined. Parties’ positions on market definition are summarized in the following section.

2. Parties’ Proposals Concerning Market Definition

a) Metropolitan Statistical Area (MSA)

SBC, Verizon, AT&T, and Sprint propose that the market be defined to consist of separate areas corresponding to Metropolitan Statistical Areas (MSAs), as established by the federal Office of Management and Budget (OMB). The OMB defines MSAs as a county or group of counties with a city or other urbanized area of at least 50,000 population. The OMB describes MSAs as

population centers “having a high degree of social and economic integration with the central county as measured through commuting.”⁹

There are variations in how different parties believe the MSA market definition should be applied. SBC would limit each defined market to only those portions of each identified MSA that are within the SBC incumbent service territory. Verizon, on the other hand, would apply the entire MSA as the market definition to include *both* incumbents’ service territory as a single market. Verizon also proposes to limit the market definition in the Riverside MSA to the Loop Rate Zone 1 area in its western portion. Moreover, while AT&T and Sprint agree that the MSA should be defined as the relevant market, they disagree with the ILECs in terms of how broadly CLEC deployment should be disbursed in order to conclude that the trigger is met in a given MSA.

Proponents argue that MSAs are a suitable market definition because they can be objectively measured, and have well-established geographic boundaries set by the OMB that capture economic communities of interest.¹⁰ SBC witness Tardiff asserts that “the high degree of social and economic integration present in such areas implies that firms would generally market services throughout this geographic area.”¹¹ MSAs have previously been used to define local markets for purposes of other aspects of telecommunications regulation. For example, the FCC used MSAs for its existing unbundled switching carve-out for end users with 4 or more DS0 lines.¹²

⁹ Ex. 42 (Tardiff) at 4, quoting OMB.

¹⁰ See Office of Management and Budget, Standards for Defining Metropolitan Statistical Areas: Federal Register: December 27, 2000 (Volume 65, Number 249), p. 82238.

¹¹ Ex. 42 (Tardiff) at 24-25.

¹² Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CCI Docket No. 96-98, Third Report and Order and Fourth Notice of Proposed

Proponents argue that because MSAs encompass the typical reach of newspaper, radio, and television advertising, they are large enough to permit CLECs to “target specific markets economically and efficiently” throughout the MSA. *TRO* ¶ 495. In other contexts, the FCC has found that MSAs were narrow enough so that the competitive conditions within each area are reasonably similar, yet broad enough to be administratively workable. (See Pricing Flexibility Order at 74.) By contrast, in its Pricing Flexibility Order, the FCC found that “defining geographic areas smaller than MSAs would force incumbents to file additional pricing flexibility petitions, and, although these petitions might produce a more finely-tuned picture of competitive conditions, the record does not suggest that this level of detail justifies the increased expenses and administrative burdens associated with these proposals.” *Id.*

Verizon argues that MSAs “take into consideration the locations of customers actually being served . . . by competitors.” *TRO* ¶ 495. Verizon claims a correlation exists between the population centers represented by certain MSAs and the location of customers actually served by competitors using their own switches within Verizon’s serving territory.

b) UNE Loop Density Zone

Allegiance proposes that markets be defined based upon “UNE Loop Density Rate Zones.” The Commission has approved three UNE Loop Density Pricing Zones for the SBC service territory based upon differing levels of customer density. Wire centers in Zone 1 generally have a higher density than those in Zone 3. Although Verizon does not currently have permanent Loop Rate Zone designations approved by the Commission in California, Verizon has

Rulemaking (rel. November 5, 1999) (the “*UNE Remand Order*”) at ¶¶ 276-98; *TRO* at ¶ 497.

proposed Loop Rate Zone assignments for its serving territory in its UNE filing in R.93-04-003/I.93-04-003.

Allegience claims that the most critical factor in assessing the market is the number of lines that a CLEC can profitably serve through individual wire centers, and that wire centers with the greatest customer density will tend to attract the most competitors. Allegience argues that UNE loop density rate zones thus provide a meaningful proxy for customer density differences. The TRO states that “if competitors with their own switches are only serving certain geographic areas, the state commission should consider establishing those areas to constitute separate markets.”¹³ Allegience argues that loop density zones more accurately capture distinctions among areas where CLEC customers are being served than MSAs.

SBC witness Tardiff testified, however, that SBC’s UNE loop rate zones do not vary significantly within the seven major MSAs in California. CLEC mass market customers reside in wire centers that account for 97% and 75%, respectively, of lines in UNE loop rate zones 1 and 2. The wire centers with the highest UNE loop rates (zone 3) contain no mass market UNE-Ls served by CLEC switches, but account for only 0.4 million of the 13.6 million SBC lines (less than 3%) in the major MSAs.

Verizon also states that UNE loop rate zones could define relevant geographic markets as an alternative to the MSA. Verizon suggests that if loop rate zones were adopted as the relevant market definition, the Commission could apply Verizon’s proposed loop rate zones as separate markets for switch deployment analysis. A narrower definition of the geographic market would include areas in proposed loop rate zone 1 within the San Francisco-Oakland-

¹³ TRO at ¶ 495 n. 1537.

Fremont MSA, the Los Angeles-Long Beach-Santa Ana MSA and the Riverside-San Bernardino-Ontario MSA.

c) Local Exchange Area

TURN proposes that the market be defined as the ILEC local exchange area. A local exchange area covers a cluster of contiguous wire centers that normally reflects a larger community of interest, such as Los Angeles or San Francisco, but does not generally extend to outlying areas, as does a MSA. For SBC, local exchanges are defined in its Network & Exchange Services Tariff, Section A6.2.7.B.1 (Toll Rate Guide).

TURN recommends that where there are multiple district areas (DAs) within larger exchanges, such areas be treated as one market. Verizon indicates in its tariff that an exchange “consists of one or more central offices, usually located in the same city, town or village, forming a local system providing local service between customers in the city, town or village, or contiguous thereto, at rates established for that area.”¹⁴ ORA expresses support for the local exchange market definition as a compromise between other parties’ proposed definitions.

TURN argues that its definition meets TRO criteria, and reflects homogenous market traits. Since retail rates and UNE-Loop rates should be comparable across the exchange, the opportunity to judge whether an entrant is impaired without access to the local circuit switching and common transport UNEs can be readily evaluated across a local exchange. By using the exchange market definition, CLECs should be able to build a reasonably efficient backhaul network to bring traffic from the ILEC’s wire centers within the exchange to the CLEC switch. The boundaries of the market are administratively easy to determine and are available to all entrants.

¹⁴ Verizon Tariff, Schedule Cal. P.U.C. No. D&R, Definitions.

d) Wire Center

MCI proposes that markets be defined at the ILEC wire center level, arguing that many of the factors that the TRO directed states to consider in defining markets vary at the wire-center level. MCI witness Murray claims that the ILEC wire center provides a “natural unit of analysis” because impairment regarding local switching is closely tied to the incumbent’s loops, and wire centers are the focus of outward radiating ILEC loop facilities. Murray also argues that the relevant data needed to analyze markets are available at the wire center level, and that aggregating the analysis based on units any larger than a single wire center could yield misleading results. As an example, Murray argues that the feasibility of entry into one wire center would not reveal whether it was commercially feasible to enter a second adjoining wire center, depending on the actual costs of deployment and revenue opportunities in the second wire center. MCI opposes defining the market by units larger than a wire center, arguing that to do so would result in an imprecise basis to apply the triggers and would not be sufficiently granular.

3. Conclusions of the Staff Concerning Market Definition

a) Summary

The divergence in views concerning market definition indicate that different economic criteria and different-sized geographic areas have been defined as “markets” in the other settings based upon the particular analysis at issue. Here, we are specifically concerned with market definition as the basis to conduct an analysis distinguishing relevant differences among areas where carriers deploy mass market switching. Based on our review of the evidence, as discussed below, we conclude that the wire center offers the most meaningful market definition in the context of the analysis being conducted here.

The market definition should reflect the locations of mass market customers served by CLEC self-provisioned switching, as well as variations in factors affecting competitors' ability to serve each group of customer. *See TRO* ¶¶ 495-496. Market conditions identified in *TRO* ¶ 495 are indicators of geographic "variations in factors affecting competitors ability to serve each group of customers, and competitors ability to target and serve specific groups of customers economically and efficiently using currently available technologies."¹⁵ If we defined the market on an MSA basis, we could not determine with as much precision whether or to what extent variations in such factors within an MSA affect competitors' "ability to serve each group of customers."

The FCC noted the "extreme variations in population density, and thus wire center line densities, across the country" as a reason why markets needed to be defined on a more granular basis.¹⁶ To the extent the market is defined on a more granular basis, the likelihood is reduced of overbroad generalizations concerning the extent of CLEC deployment. In recognition of this fact, the FCC stated that "a more granular analysis is generally preferable..." in defining markets. Of all of the proposed alternatives for market definition offered by parties, the wire center offers the most granular and nuanced depiction of actual marketplace deployment. To varying degrees, parties' other proposed market definitions provide a less precise picture of actual marketplace deployment, and as such, provide a less precise framework in which to apply a deployment analysis.

We find that the MSA does not sufficiently distinguish variations in the extent to which mass market customers are served by competitors using their

¹⁵ *TRO* ¶ 495.

¹⁶ *TRO*, footnote 1536.

own switches. CLEC service to mass market customers in certain wire centers within an MSA does not necessarily indicate CLEC ability to use self-provisioned switches “to serve various groups of customers” throughout the entire MSA as a discrete market. The presence of significant variations in regions within MSAs where the mass market is claimed to be served by competitors indicates that an MSA consists of more than a single market.

The TRO states that “in circumstances where switch providers (or the resellers that rely on them) are identified as currently serving, or capable of serving, only part of the market, the state commission may choose to consider defining that portion of the market as a separate market for purposes of its analysis.”¹⁷ Wire centers reflect such separate markets. While UNE loop rate zones and local exchange areas provide a less aggregated view of the market compared to the MSA, they likewise insufficiently depict variations in switch deployment. By contrast, a wire center definition best reflects the extent to which customers are actually served or capable of being served within different markets in California.

An overly broad market definition increases the risk of error by ignoring relevant market-driven variations among regions. The problem of applying an overly broad market definition is illustrated by parties’ dispute as to whether a de minimus number of customer lines qualifies a CLEC as serving the mass market under the TRO “trigger” test. Defining the market as constituting an entire MSA risks countervailing errors: either 1) erroneously extrapolating limited mass market switching deployment to include portions of an artificially large phantom “market” or else 2) erroneously concluding that no part of an oversized “market” meets switch-based trigger criteria based on its “de

¹⁷ TRO, n. 1552.

minus” market coverage even though a smaller market definition (more realistically aligned with its actual market) might otherwise qualify as meeting switch-based trigger criteria. Errors of either extreme can be avoided by using a wire center market definition. In this way, deployment findings more realistically match market characteristics.

b) The Wire Center Best Distinguishes Where Customers Are Served

As noted by the FCC, “actual marketplace evidence is the most persuasive and useful kind of evidence submitted. In particular, we are most interested in granular evidence that new entrants are providing retail services in the relevant market using non-incumbent LEC facilities...”¹⁸ We conclude that a wire center market definition best reflects the variations among areas where mass market customers are actually served by CLECs utilizing UNE-L. By contrast, defining the market as larger areas does not capture such distinctions as accurately.

(1) Mass Market Customer Distribution in SBC Incumbent Territory

SBC witness Tardiff’s calculations¹⁹ show that the level of UNE-L competition varies significantly within the seven major MSAs where SBC claims the triggers are met. This variation is evident whether the MSA is disaggregated into UNE Loop Density Zones or further into individual wire centers. Under a UNE loop density zone market definition, the seven markets underlying SBC’s MSA market definition would correspond to 20 separate markets comprised of two or three UNE loop rate zones per MSA.

SBC was directed by the ALJ to recast its trigger analysis assuming markets defined as UNE loop density rate zones. SBC witness Hopfinger

¹⁸ TRO ¶ 93.

¹⁹ Ex. 42 (Tardiff 12/12 Direct) at 8.

calculates that all “Rate Zone 2” markets within each of the seven MSAs at issue have sufficient UNE-L deployment to satisfy the self-provisioning trigger.

Hopfinger further calculates that five of the six “Rate Zone 1” markets in the MSAs at issue satisfy the self-provisioning trigger. Hopfinger concedes that the self-provisioning trigger is not satisfied in any of the MSA regions covering “Rate Zone 3.”²⁰

The Zone 3 designation represents the wire centers with the highest UNE loop costs and loop prices.²¹ UNE-L coverage typically is higher in the Zone 1 wire centers (exhibiting the lowest UNE loop costs and prices) than in the Zone 2 wire centers.²² The Zone 1 wire centers generally correspond to the largest, most densely populated wire centers. Zone 3 wire centers represent the smallest, least densely populated wire centers.

Allegiance witness Strickling argued, however, that the SBC triggers are not satisfied in Rate Zone 2 in at least three of the MSA regions. In the Santa Rosa MSA, three or more CLECs have collocated in only three wire centers in Rate Zone 2, comprising only 27% of the wire centers therein. Even within those three wire centers, Strickling claims that no more than two collocators are serving the mass market. In the San Diego MSA, Zone 2, only six of the 11 wire centers have at least three CLEC collocations, a level of penetration that Strickling claims is insufficient to constitute coverage of the mass market. In the San Jose MSA, Strickling finds that at least three competitors are collocating in all of the Zone 1 and 2 wire centers, but none in Zone 3.

²⁰ Ex. 194 (Hopfinger Supp.) at 6.

²¹ Ex. 120 (Murray 1/16 Reply), Attachment TLM-R3, Zone 3 table.

²² Ex. 120 (Murray 1/16 Reply), Attachment TLM-R3, Zone 1 and 2 tables.

UNE-L CLECs serve a much lower percentage of the SBC wire centers and a much lower percentage of the total retail lines than Dr. Tardiff's coverage calculation implies. Switch-based competitors have targeted specific wire centers for market entry, rather than MSAs as a whole.²³ The percentage of wire centers within an MSA in which CLECs serve at least some mass-market customers show significant variation, ranging from a high of 79% (in the Los Angeles - Long Beach - Santa Ana MSA) to a low of 0% in several MSAs and outlying areas.²⁴ MCI's Ex. 47C shows that few individual CLECs have entered any MSA broadly, and only two UNE-L CLECs in SBC's service territory in California serve more than 50% of the wire centers in *any* MSA in the state.

Attachment CH-8 to Hopfinger's testimony sets forth maps identifying wire center boundaries within each of the seven "trigger" MSAs in which at least one UNE-L competitor purportedly serves mass market customers. MCI witness Murray replicated similar maps, using both SBC's and Verizon's own loop deployment data in Attachment TLM-R0 to Exhibit 120 C (attached as an appendix to this report). The maps show that that in each of the MSAs, there are clusters of wire centers (marked in dark blue to show where at least one UNE-L competitor purportedly serves mass-market customers) and significant regions of outlying wire centers (marked in light blue to show where no UNE-L carriers serve mass-market customers). We review each MSA individually below.

SBC claims that CLECs are collocated in 89 of the 103 wire centers in the LA MSA.²⁵ We find, however, that this MSA contains a geographically cohesive area with no UNE-L competitors serving mass-market customers (shown in the

²³ Ex. 120 (Murray 1/16 Reply) at 24-25. Attachment TLM-R4.

²⁴ Ex. 120 (Murray 1/16 Reply) at 26.

²⁵ Ex. 50 (Hopfinger) Attachment CH-4.

map as a light blue region across the northern area of the MSA, extending inland).

In the Riverside—San Bernardino—Ontario MSA, SBC claims that the three trigger candidates serve over 3200 mass market loops, collocated in 7 of the 11 wire centers. In this MSA, however, a geographically isolated group of wire centers near the Nevada border are without switch-based competitors in contrast to the more populous areas of the MSA near Los Angeles. Thus, no mass market customers are served by CLECs in the vast majority of the Riverside MSA, but are concentrated only in the small western-most region of the MSA. Moreover, if an MSA market definition were used, wire centers in the Riverside MSA would be treated as a separate market from wire centers in the Los Angeles (LA) MSA. Even if the market were assumed to be larger than a single wire center, this small region would appear to be part of same market covering LA MSA wire centers rather than those in the Riverside MSA.

In the Sacramento MSA, SBC claims that the trigger candidates serve over 3400 loops, collocated in 24 of the 47 wire centers. Yet, the lines of one of the CLEC providing UNE-L service is concentrated in fewer than 20% of the MSA's wire centers. Ex. 164-C (Economides – AT&T), at 41. No evidence is provided concerning distribution of UNE-L service for the other claimed CLECs. In this MSA, UNE-L competition is most highly concentrated in the immediate vicinity of Sacramento and Roseville, while the vast majority of wire centers from the Sierra foothills to the Nevada border are shaded light blue indicating *no* UNE-L competitors serving mass-market customers in those rural regions of the MSA.

In the San Diego – Carlsbad – San Marcos MSA, SBC claims that seven trigger candidates serve over 16,000 mass market loops, plus two cable telephony providers serve more than 214,000 residential customers. CLECs are collocated in 37 of the 53 wire centers in the San Diego MSA. In this MSA, UNE-L

competitors are concentrated in coastal and immediately adjacent wire centers, with virtually all of the inland portion of San Diego County shaded light blue, indicating *no* UNE-L competitors serving mass-market customers.²⁶

The three Bay Area MSAs show a common pattern of UNE-L carriers centered round the Bay itself, with little or no such carriers in the outlying wire centers. In the San Francisco MSA, SBC claims that eight of the trigger candidates serve nearly 10,000 mass market loops, plus two-cable telephony candidates serve more than 109,000 residential customers. CLECs are collocated in 60 of the 75 wire centers in the San Francisco MSA.

UNE-L competition in wire centers within the San Jose – Sunnyvale – Santa Clara MSA show no uniform distribution. Instead, UNE-L customers are concentrated in wire centers located only in the northern region of the MSA, while isolated wire centers in the central and southern portion of the MSA seem disconnected from the northern cluster, and show *no* UNE-L competitors serving mass-market customers.

In the Santa Rosa MSA, SBC claims that two of the three trigger candidates serve nearly 1,000 mass market loops, with the third carrier being a cable telephony provider serving more than 12,000 residential customers. Yet, virtually all UNE-L competition for mass-market customers in the Santa Rosa MSA is centered only around the Cities of Santa Rose and Petaluma. The coastal and northern areas of the MSA are almost uniformly shaded light blue indicating *no* UNE-L competitors serving mass-market customers there. The largest wire center in the Santa Rosa – Petaluma MSA has nearly three times as many retail lines as the second largest wire center in that MSA. SBC also reports that nearly 50 wire centers in the seven MSAs for which SBC seeks a finding of no

²⁶ Ex. 120 (Murray 1/16 Reply) at 22-23.

impairment have more than 75,000 lines, whereas almost 60 wire centers have fewer than 5,000 retail lines.²⁷ These variations support a delineation of the market on a wire center basis, rather than lumping together disparate wire centers by erroneously defining the market as an MSA.

(2) Mass Market Customer Distribution in Verizon's Territory

The distribution of mass market customers served on a UNE-L basis within Verizon's territory shows a similarly mixed pattern as that found in SBC's territory. Verizon witness Fulp testified that competing carriers operate at least 55 local circuit switches that are physically located within Verizon's territory in California, and that approximately 17 competing carriers of all sizes have deployed local circuit switches serving Verizon rate centers in California.²⁸ Fulp presented a map showing locations of CLEC switches being used to provide local service in California (including packet switches, circuit switches, remote and "soft" switches). Verizon witness Fulp presented a map (Attachment 4 to his testimony) depicting the areas in each MSA covered by CLECs claimed to be serving mass market customers with their own switches. This map shows large areas in which UNE-L CLECs offer service.²⁹ MCI (in Attachment 2 of its opening brief) replicates Fulp's Attachment 4, using Verizon's own data, but colors wire centers according to how many UNE-L CLECs operate in each wire center.³⁰ The MCI map shows that many wire centers have only one or two UNE-L CLECs, even based on Verizon's claimed triggering companies. Only 22

²⁷ Ex. 50C (Hopfinger 12/12 Direct), Attachment CH-10.

²⁸ Ex.93 (Fulp) Direct, at 17.

²⁹ Verizon did not initially count any cable companies toward the retail trigger. Ex. 93 C (Fulp Direct), Attachment 3 (proprietary).

³⁰ The maps in Attachment 2 were Attachment TLM-R12 to Ex. 120.

out of 74 wire centers in the L.A. MSA would qualify as meeting the trigger even using Verizon's criteria. No wire centers would qualify in the other two MSAs (i.e., San Francisco and Riverside) where Verizon claims the triggers are met.

In Verizon's territory, the customers served by self-provisioned CLEC switches within a particular MSA are located in the areas of Verizon's serving territory corresponding to Loop Rate Zone 1. Loop Rate Zones to some extent account for "variation of factors affecting competitors' ability to serve each group of customers." *TRO* ¶ 495. Verizon's loop rates will vary by Loop Rate Zone. As the FCC recognized, "if UNE loop rates vary substantially across a state, and this variation is likely to lead to a different finding concerning the existence of impairment in different parts of the state, the state commission should consider separating zones with high and low UNE loop rates for purposes of assessing impairment." *TRO* ¶ 496 n.1538.

Competitors also may target particular customers within particular Loop Rate Zones, as the FCC itself recognized. *TRO* ¶ 495 n. 1539. Loop Rate Zone 1 in the Riverside-San Bernardino-Ontario MSA, however, is significantly larger than the geographic areas where there currently is facilities-based competition. Facilities-based competition is clustered in the Loop Rate Zone 1 area in the western portions of the MSA. Therefore, consistent with the FCC's requirement to "take into consideration the locations of customers actually being served (if any) by competitors," Verizon proposes that the market area be designated as the Loop Rate Zone 1 area in the western portion of the MSA near the Los Angeles-Long Beach-Santa Ana MSA. The fact that Verizon proposes to subdivide the Riverside MSA to reflect wire centers only in the highest density zone lends support to the conclusion that MSAs are not sufficiently granular to form the basis for a market definition.

c) Scale Economies Relationship to Market Size

While seeking a “granular” approach to market definition, the FCC also cautioned to “not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market.” *TRO* ¶ 495. Accordingly, the market definition also must properly account for available economies of scale and scope. We conclude that the wire center not only offers the most granular delineation of marketplace variations, but also reasonably reflects a competitor’s ability to realize available economies of scale and scope, as referenced in the *TRO*.

Although we find that the relevant basis for assessing economies of scale is at the wire center level, not all of the economies of scale associated with collocation in a wire center are necessarily attributable to mass market customers. As the *TRO* observed, where CLEC facilities serve both mass market customers and customers in other markets (e.g. enterprise customers), “the state’s analysis of mass market customers in a particular market should not assume that the entire cost of those facilities is borne by these customers.”³¹ In assessing the size of the market in relation to scale economies, we thus recognize that at least some of the available economies of scale in a wire center may come from sources other than the mass market.

Various parties argue that a market defined as a wire center is too small to enable a competitor “to take advantage of available scale and scope economies from serving a wider market.” AT&T witness Economides testified that in order to take advantage of available scale and scope economies, an efficient CLEC would likely map out a “footprint” large enough to approximate an MSA, LATA or other similarly broad area, while in some very dense areas, it may be only a

³¹ *TRO* ¶ 520, n. 1589.

portion of such an area.³² AT&T's preference for a broader market definition, however, assumes no differences between ILECs and CLECs in terms of their ability to realize scale economies through expansion into larger areas. Economies of scale available to a CLEC, however, are often more limited compared to economies of scale for an ILEC. Such limitations are relevant in determining the geographic size of a CLEC's relevant market. The TRO observes in this regard:

"Scale economies, particularly when combined with sunk costs and first mover advantages..., can pose a powerful barrier to entry. If entrants are likely to achieve substantially smaller sales than the incumbent, then with scale economies their average costs will be higher than those of the incumbent, putting them at a potentially significant cost disadvantage to the incumbent. Profitable entry may not be possible if retail prices are close to the incumbent's average costs."³³

Accordingly, we conclude that it is the *competitor's* scale economies in competing against an ILEC, *not the scale economies available to the ILEC*, that should apply in defining the relevant market. We cannot presume that competitors share the same ability to realize economies of scale over broad areas as enjoyed by the incumbent, nor can we ignore relevant differences faced by competitors as set forth in *TRO* ¶ 87 that limit CLECs' ability to expand market coverage to realize greater economies of scale. Thus, as explained below, we find that the factors set forth in *TRO* ¶ 495 limit the geographic reach of the market within which CLECs realize economies of scale.

A CLEC can realize greater economies of scale-- and thus incur lower per-unit costs-- in wire centers with higher customer density. The scale economies relating to customer density vary by wire center. In connection with discussion

³² Ex. 163 (Economides) at 40.

³³ *TRO* ¶ 87.

of a potential deployment analysis, the TRO directs state commissions to “take into consideration an entrant’s likely market share, *the scale economies inherent to serving a wire center*, and the line density of the wire center.”³⁴ The TRO also notes “evidence in the record that economic impairment may be especially likely in *wire centers* below a specific line density.”³⁵ Thus, we conclude that the wire center market definition best explains differences in customer density, which, in turn, reflects the available economies of scale. CLEC entry into a given market is a function of the economies of scale *available with respect to each separate wire center*, particularly as a function of collocation and backhaul costs. As noted by MCI, there are substantial fixed costs for each of these activities in each separate wire center.³⁶ These costs constrain the geographic market within which economies of scale are realized, as explained below.

d) Variations in Collocation Deployment as an Indicator of Market Definition

SBC argues that CLECs have established hundreds of collocations throughout the seven “trigger” MSAs, including in a majority of the central offices (excluding Santa Rosa).³⁷ SBC claims that competitors have collocated in 78% of the central offices in the San Jose MSA, 80% of the central offices in the San Francisco MSA, and 85% of the central offices in the Los Angeles MSA. SBC claims that CLECs collocate in central offices serving 89% of access lines in the seven MSAs.³⁸ SBC witness Mitchell testified that in central offices of 5,000 lines

³⁴ TRO, ¶ 520, footnote omitted, emphasis added.

³⁵ *Id.*

³⁶ MCI Opening Brief, page 60.

³⁷ Ex. 50 (Hopfinger Direct) Attachment CH-4.

³⁸ Ex. 42 (Tardiff Direct) at 8.

or more, SBC could potentially serve all CLEC requests for space in 96.5% of the offices.

SBC's statistics, however, do not distinguish between collocations serving the mass market as opposed to enterprise customers. To the extent that a collocation facility is used exclusively to serve enterprise customers, it does not necessarily indicate the extent to which mass market customers are served. Although enterprise customers may be reached over broader distances through the use of high capacity "enhanced extended loop" (EEL) collocation facilities, such facilities are not available for serving mass market customers. SBC has not developed a method by which a DS0-level EEL can be used in combination with a hot cut to allow carriers to reach mass market customers by their own facilities in wire centers where they are not collocated.³⁹ Without access to an EEL, the CLEC must install collocation facilities in each separate wire center to access mass market customers' loops served by that wire center and must direct traffic from those loops to the CLEC's own switch. A CLEC cannot reach mass market loops in wire centers where they are not collocated.

MCI witness Starkey testified that CLECs target only specific wire centers for collocation based upon the characteristics of each wire center, as opposed to the characteristics of an MSA. For example, the quality and design of the local loop facilities within a given wire center, and specifically, the proliferation of Integrated Digital Loop Carrier (IDLC) facilities, can play a significant role in a carrier's decision to enter a market. Starkey testified that UNE-L carriers have had numerous operational problems wherein SBC provisions a large portion of its customer loops on IDLC facilities; therefore CLECs tend to avoid collocating in wire centers with a high percentage of IDLC facilities. Starkey presented a

³⁹ Ex. 144 (Starkey 1/16 Reply) at 6-7.

comparison of the relative percentage of hybrid fiber loops resident in a wire center (as a proxy for IDLC proliferation) with the average number of collocations per wire center. The comparison shows an inverse relationship between IDLC proliferation and collocations.

Collocations used to serve the mass market are thus limited to certain wire centers within an MSA. Such collocations do not indicate a CLEC's ability or intent serve the mass market throughout that MSA.⁴⁰ To the limited extent CLECs have collocation arrangements to serve the mass market, the terms remain uncertain with respect to their permanent resolution.⁴¹

MCI witness Murray testified that the number of collocations per wire center varies dramatically by the size of the wire center (*i.e.*, total number of lines served). Larger wire centers typically have far more collocators than smaller wire centers. Each of the seven "trigger" MSAs covers wire-center sizes ranging from less than 5,000 lines to at least one wire center of nearly 100,000 lines. Wire centers with 30,000 or fewer lines generally have fewer than three collocators per wire center, whereas larger wire centers tend to have far more collocators.⁴²

e) Geographic Reach of the Switch Does Not Determine Market Definition

Certain parties argue that because the geographic reach of a local circuit switch encompasses broad areas, the economies of scale associated with the switch support a market definition that is broader than a wire center. Verizon witness Fulp, for example, provides illustrative maps to show the reach of switches used by three trigger candidates extends considerably beyond a single

⁴⁰ Ex. 120 (Murray 1/16 Reply) at 30.

⁴¹ Ex. 144C Starkey at 56-57.

⁴² The tables in Attachment TLM-R5 summarize these results.

wire center.⁴³ SBC claims that competitors currently serve mass market customers via self-provisioned switches throughout seven MSAs in California in wire centers that account for about 89% of the lines in those MSAs.⁴⁴ SBC witness Hopfinger testified that approximately 117 CLEC switches are deployed within the seven MSAs, and argues that those CLEC switches should be capable of serving customers throughout an MSA or an even larger area.

We agree that competitors may realize economies of scale associated with switch utilization across distances much greater than a single wire center. By the same token, however, the geographic range of a switch's technical serving capabilities is not necessarily limited even to an MSA. The range of a switch may span an entire LATA or even beyond.⁴⁵ Thus, if the technical reach of a switch were the prime determinant of market size, such a reach would rule out not only wire centers but also MSAs as a market definition. As noted in the TRO, the reach of a switch may actually cross state borders, even though the market definition is to be limited to an area less than an entire state. Therefore, more must be involved in defining relevant economies of scale and market boundaries besides simply the physical reach of a switch.

The relevant consideration in defining markets is locating *where customers* are actually *served* by CLEC switches, *not* merely the location of the *switch*.⁴⁶ Thus, the CLEC must examine the relevant economies of scale that apply to a

⁴³ Ex. 93 C (Fulp) (Proprietary Attachment 2).

⁴⁴ Ex. 42 (Tardiff Direct) at 8.

⁴⁵ SBC Opening Brief at 37.

⁴⁶ The FCC states that "because we measure alternative 'switching' in a given market, not switches located in that market, the physical location of the switch is not necessarily relevant to defining the geographic market. For example, a switch located in Rhode Island could satisfy the switching trigger in Massachusetts if it is serving customers in the relevant market in Massachusetts." (TRO, n. 1536.)

specific market area, including collocation and backhaul costs, notwithstanding the switch location or its technical potential to span broader distances. Thus, it is not the economies of scale theoretically possible from the switch that determines whether a particular market is economic to serve. As a practical matter, CLEC switches serve the mass market only in limited areas within each MSA, delineated by specific wire centers. For example, in three instances (two in the Riverside – San Bernardino – Ontario MSA and one in the San Francisco – Oakland – Fremont MSA), Verizon identifies a supposed triggering carrier that serves *only one* mass-market line in that MSA.

MCI witness Murray surmises that the limited number of mass market lines being served by certain trigger candidates suggest that the CLECs in question are achieving *scale* economies by serving a wider *scope* of customers (i.e., both enterprise and mass market) through the same switch within a given wire center. Murray reasons that such carriers could achieve the requisite *scale* economies by limiting their mass market customer base to a single wire center so long as they serve a sufficiently large base of enterprise customers,⁴⁷ even if mass market customers are served by UNE-L only in a single wire center.⁴⁸ Thus, we conclude that economies of scale on a wire center basis reasonably meet TRO market definition requirements, notwithstanding the broader scale economies of the switch, itself.

f) MSA Market Definition Presumes “De Facto” Potential Deployment

AT&T argues that in assessing economies of scale, the same market conditions must be assumed as a basis for defining the market in order to provide a consistent framework for both the trigger test and the potential

⁴⁷ Ex. 120 C (Murray) at 4.

⁴⁸ Ex. 120 C (Murray) at 41.

deployment analysis. We agree that the market definition should be applied consistently for all aspects of the analysis, but disagree that a potential deployment test should ignore relevant market differences between ILECs and CLECs. The relevant market should be defined by considering evidence of *real-world* marketplace conditions. Moreover, any potential deployment analysis should take into account relevant real-world operational and economic barriers.

To the extent that the relevant geographic market is a function of the available economies of scale, an MSA market definition implies that an efficient CLEC could realize scale economies by expanding into additional wire centers throughout an MSA. Yet, as AT&T witness Economides testified, “where CLECs have only used non-ILEC switching to compete in a small area (for example one or two wire centers) or for small niches of customers, the inference that economic barriers to entry are negligible throughout the MSA simply cannot be made using the triggers alone.”⁴⁹

By using an MSA market definition, however, the ILECs draw such inferences by claiming trigger eligibility throughout all wire centers in an MSA for carriers actually serving only in a limited number of wire centers. Support for such an inference would require evidence of the potential for CLEC deployment into those additional wire centers. Since the ILECs presented a “triggers-only” case, however, they offered no evidence for potential deployment of switching facilities into additional wire centers. Thus, the record lacks evidence to prove potential deployment to expand into wire centers where no competitors presently serve mass market customers.

Correspondingly, there is no evidence of CLECs’ potential to realize “available economies of scale” assuming expansion of the existing serving area to

⁴⁹ Ex. 163 (Economides) at 39.

incorporate additional wire centers and assuming barriers to such expansion were negligible. Without a potential deployment analysis, we are limited to mere speculation as to the potential for economies of scale from entering additional wire centers.

Adoption of the MSA as a market definition would thus, by fiat, unduly assume “de facto” potential deployment for wire centers that are not presently served by competitors without an evidentiary showing. The MSA market definition would assume that switch deployment is feasible even in wire centers where no CLEC has found it economically viable to install collocation facilities. By comparison, a wire center market definition more appropriately relates the market only to the actual reach of the area within which a CLEC can offer service utilizing actual collocation facilities that have been installed in a given wire center.

g) Multiple Markets Versus A Single Market

Verizon witness Taylor argues that no CLEC holds itself out as providing service in individual ILEC wire centers.⁵⁰ Similarly, AT&T witness Economides argues that it is unlikely that an efficient CLEC would enter a state intending to serve only a single wire center.⁵¹ While we agree with these observations, our market definition does not presume or require that a CLEC enters California to serve only a single market. Moreover, switch-based competitors identified by the ILECs in its deployment analysis serve multiple MSAs within the state. Yet, the ILECs claim each MSA is a separate market. Thus, under any of parties’ proposed market definitions, CLECs hold themselves out as serving multiple markets within California.

⁵⁰ Ex. 103 (Taylor) at 28.

⁵¹ Ex. 163 (Economides) at 40.

The fact that each market contributes economies of scale to the CLEC does not imply that separate markets should be collapsed into one consolidated market. Moreover, no party proposed that adjoining MSAs be combined as a larger mega market. Each market (however defined) will contribute economies of scale and scope to the total company's wealth. The principle of multiple markets increasing total company economies of scale applies on a wire center basis as well as on an MSA basis, or any level of market definition in between.

h) Reach of Mass Media Advertising

Proponents of the MSA market definition point to the wide reach of mass media advertising as an indication that the relevant market is the MSA. SBC witness Tardiff asserts that “[m]ass-market entry is associated with media advertising aimed at a geographic area at least as large as the MSA; thus, we would expect the carrier to serve the entire MSA because advertising throughout the MSA but not serving the entire area raises costs and harms the carrier’s reputation.”⁵²

We do not find, however, that mass media advertising necessarily targets separate MSAs as discrete markets. Carriers’ mass-market advertising may, for example, cover areas where their service is not available, and mass media advertising may reach across MSA boundaries as well as wire center boundaries. For example, the same advertisement could reach customers at the San Francisco MSA southern boundary as well as the adjoining northern portion of the San Jose MSA. The reach of mass media advertising does not form any definitive basis for delineating market boundaries. Mass media advertising is rather an example of a common overhead that may benefit multiple markets, whether they are defined as wire centers, MSAs, or some other basis.

⁵² Ex. 42 (Tardiff) at 25.

i) Retail Pricing Patterns As An Indicator of Market Definition

In its support of the MSA as the relevant market, SBC points to the Department of Justice's and Federal Trade Commission's *Horizontal Merger Guidelines* and similar economic treatises on geographic market definition.⁵³ As explained by SBC, in defining a market, a merger analysis "starts with the products of the firm(s) in question and then poses the question whether customers would shift to the products of firms at other locations in the event of a price increase by the first firm(s)."⁵⁴ As noted by MCI, however, such an analysis involves a "smallest market" principle: "A relevant market is a group of products and a geographic area *that is no bigger than necessary* to satisfy this test."⁵⁵ Thus, the *Merger Guidelines* begin with a market definition that includes "the location of each merging firm (or each plant of a multiplant firm)."⁵⁶ As MCI witness Murray explains, in a telecommunications setting, because the location of each customer is fixed, with each served on separate loop plant, the location of each "plant" of a multiplant firm is actually each customer's premises.⁵⁷ For reasons of practicality, however, it is reasonable to begin with individual wire centers, because the critical plant deployed by UNE-L providers

⁵³ See SBC Opening Brief, at 11 and n. 6.

⁵⁴ SBC Opening Brief, at 11.

⁵⁵ *Horizontal Merger Guidelines*, § 1.0 (emphasis supplied). The full text of the *Horizontal Merger Guidelines* of the U.S. Department of Justice and Federal Trade Commission, issued April 2, 1992, and revised April 8, 1997, is available online at http://www.usdoj.gov/atr/public/guidelines/horiz_book/10.html.

⁵⁶ *Horizontal Merger Guidelines*, § 1.0.

⁵⁷ Ex. 119 (Murray 12/12 Direct) at 46.

consists of the collocations and digital loop carrier equipment deployed at each wire center.⁵⁸

The *Merger Guidelines* then direct expansion of the market to include areas in which a hypothetical monopolist would not be able to impose a small but significant price increase (5%) without inducing customers to shift to other products.⁵⁹ Customers, however, would not be able to shift to other products if the ILEC increased its prices in wire centers in which the ILEC faces no current switch-based competition. A customer could not shift to other products because none would be available to them in the absence of UNE-P. Thus, in such a setting, the MSA would not meet the Merger Guidelines test. Given the lack of ubiquitous mass market competitors within the major MSAs, we conclude that a market definition on a wire center basis therefore best reflects the effects of price competition consistent with the Merger Guidelines.

j) SBC Customer Distribution Data are Inconclusive

SBC witness Hopfinger presented evidence to as to the locations of current CLEC customers served via self-provisioned switching to support the claim that CLEC customers are disbursed broadly throughout each MSA. However, Staff does not believe that the record supports this claim. Hopfinger identifies additional data sources relating to the geographic areas where CLECs can serve: (1) ported number data; (2) CLEC NXX assignments; and (3) locations where CLECs have collocated in SBC central offices.

(1) Ported Numbers

SBC presents ported number data as an indication of CLECs using self-provisioned switching to serve geographic areas that correspond to SBC's service

⁵⁸ *Id.*

⁵⁹ Horizontal Merger Guidelines, § 1.0.

territory in each of the relevant MSAs. An end user's telephone number is ported from SBC's switch to the CLEC's switch when the end user changes service providers. Thus, each ported number represents a line served by a CLEC self-provisioned switch. In the MSAs at issue here, numerous CLECs have ported hundreds of thousands of numbers, in nearly every central office in those MSAs. Ex. 50 (Hopfinger Direct) at 12-13 & Att. CH-4.

SBC's ported number data, however, provides no delineation of how many of the numbers at issue are used to serve the mass market, as opposed to enterprise customers. MCI witness Murray testified that one of the carriers reported by SBC as having ported thousands of lines in certain wire centers serves primarily enterprise customers, not mass market customers, based on its web site representations. Staff discount ported number data as a measure of mass market coverage without a way to delineate how many ported numbers serve enterprise customers.

(2) NXX Code Assignments

In addition to porting an end user's telephone number, a CLEC serving customers with its own switch may assign new telephone numbers to its end users from the "NXX" (or central office) codes assigned to its switch by the North American Numbering Plan Code Administrator. SBC identified NXX assignments as evidence that CLECs are using their switches to serve local customers in rate exchange areas throughout the relevant MSAs. In California, CLECs have obtained hundreds of NXX codes assigned to rate areas throughout the seven major MSAs. Ex. 50 (Hopfinger Direct) at 13-14. To obtain an NXX code, a CLEC must document that it is or will be capable of providing service within 60 days of the time assigned numbers are activated. Thus, SBC argues that NXX codes that CLECs have obtained identify the geographic areas that CLECs serve or can serve with their own switches, and constitute evidence of extensive market coverage by CLECs. *Id.* at 14-15 & Att. CH-3.

Again, staff does not find the NXX data to be probative of mass market coverage of competitors within an MSA. In Attachment CH-3, Hopfinger disclaims knowledge as to how many NXX holders are actually local exchange providers serving the mass market, or the extent to which customers served by a given NXX are located outside of the MSA shown. Without such delineation, staff has no basis to determine to what extent the NXX data indicates the magnitude or location of mass market customers served by CLECs.

(3) Collocation as an Indicator of CLEC Customer Distribution

SBC presents collocation data as an indicator of the locations of mass market customers served by CLEC switches. The Report has already discussed above the limitations of collocation data in connection with economies of scale issues.

C. Cross-Over Demarcation of the Mass Market: Number of Lines Served

1. Background

The TRO defines mass market customers as “analog voice customers that purchase only a limited number of POTS [“plain old telephone service”] lines, and can be economically served via DS0 loops.”⁶⁰ To the extent that a customer purchases more than the maximum number of lines at a single location that can be economically served via DS0 loops, the carrier would then utilize a DS1 or higher capacity loop to serve that customer. That customer served by the higher capacity loop would be defined as part of the enterprise market, rather than the mass market. In order to identify the qualifying mass market lines served by switch-based CLECs in a given geographic market, therefore, a determination must be made concerning the cross-over point at which a customer is counted as an enterprise customer, rather than as a mass market customer. In this section, we thus address market definition with respect to the applicable dividing line between the “mass market” and “enterprise market” in terms of the number of DS0 lines that a customer receives at a single location. In this regard, the TRO states:

[A] state must determine the appropriate cut-off for multi-line DS0 customers as part of its more granular review. This cross over point may be the point where it makes economic sense for a multi-line customer to be served via a DS1 loop. For certain customers, carriers must decide whether they will provide service using DS0 or DS1 facilities based on the number of DS0 loops needed to meet the particular customer’s needs.⁶¹

⁶⁰ TRO ¶ 497.

⁶¹ *Id.* “At some point, customers taking sufficient number of multiple DS-0 loops could be served in a manner similar to that described above for enterprise customers – that is, voice services provided over one or several DS-1s.”

In this regard, FCC Rule 319(d)(2)(iii)(B)(4) provides:

Specifically, in establishing this “cutoff,” the state commission shall take into account [1] the point at which the increased revenue opportunity at a single location is sufficient to overcome impairment and [2] the point at which multi line end users could be served in an economic fashion by higher capacity loops and a carrier’s own switching and thus be considered part of the DS1 enterprise market.

By determining which multi-line customers are “enterprise” customers, the DS0 cutoff affects eligibility for unbundled local switching (in view of the FCC national finding of non-impairment with respect to local switching to serve enterprise customers) and determines which customers must be included in the trigger analysis for mass market switching.

2. Parties’ positions

Sprint, AT&T, and SBC, each proposed a different method for establishing the cross-over point between mass market and DS1 enterprise customers in California. SBC proposes a cut-off of 4 DS0s, based on both voice and data services, such that a customer with 4 or more DS0s at a location would be in the enterprise market, while a customer with 3 or fewer DS0s would be in the mass-market. Thus, the same default cut-off proposed by the FCC for density zone 1 in the top 50 MSAs established in the *UNE Remand Order* would continue to apply. *TRO* ¶ 497. The California Small Business Roundtable (CSBRT) testified that the FCC’s cross-over point of 4 DS0s is incorrect. CSBRT argues that the DSO “cut-off” applied to small business in this proceeding is applicable only to this proceeding, and only for the narrow purpose it was intended. CBSRT/CSBA argues that any standard referenced in this proceeding has no

bearing on the Consumer Protection Proceeding (R.00-02-004) now under consideration at the Commission.⁶²

MCI interprets the TRO as imposing no absolute requirement to choose as the cutoff the point at which it makes economic sense to utilize a DS1 loop in place of multiple DS0 equivalent loops, but believes that the Commission has substantial discretion in setting any cutoff. MCI believes the mandate for establishment of any such cutoff does not apply in a triggers-only proceeding where both SBC and Verizon have foregone a potential deployment analysis. In any event, MCI believes SBC's three-line cutoff is unjustified.

MCI argues that nothing in the TRO establishes three DS0-equivalent lines as the default value for the cross-over point, and that the three line cut-off was applicable only in selected portions of particular MSAs, and then only under particular circumstances.⁶³ As the FCC noted, the three line cut-off was in effect in few areas in the country,⁶⁴ and even in those areas, the TRO grants discretion for the states to depart from the three-line cut-off if their granular review produces evidence against its application.⁶⁵

Sprint believes that a cut off should be adopted and argues that the most straightforward and effective way to establish a DS0-DS1 cutover point is on a statewide basis, recognizing that competitive carriers do not necessarily tailor their market entry plans to specific ILEC territory. Sprint applied a cost model with statewide weighted average UNE prices and a calculation of its own equipment costs for installing a channel bank at a customer premises, amortized over nine years, to establish a proposed a cross-over point at 15 DS0s at a single

⁶² Ex. 106 (CSBRT [McCormick] at 5-7).

⁶³ TRO, ¶ 497 and n.1545.

⁶⁴ TRO, ¶ 497, n. 1545.

⁶⁵ TRO, ¶ 497.

customer premises.⁶⁶ Sprint's model incorporated recurring and non-recurring charges for DS0 and DS1 loops, and the costs of a channel bank to multiplex voice channels onto a DS1 loop facility.

AT&T proposed a mathematical formula to establish separate cross-over points at 19 DS0s for SBC and 11 DS0s for Verizon. (AT&T Pitkin Direct at 14-23). AT&T's formula is based on separate analysis for SBC and Verizon, comparing the cross-over point at which the cost of serving a customer with multiple DS0 lines through UNE-P exceed the costs of serving the customer using a DS1 loop.

The Pure UNE-P Coalition proposes a cross-over point of 20 lines for SBC and 11 lines for Verizon. The Coalition argues that the cross-over point should be set at a level high enough that the end-user can determine the appropriate cross-over point that will allow customers to decide what service is the most economic and meets its needs.⁶⁷ The Coalition argues that the ILECs' proposal to preclude CLECs from ordering more than three UNE-P combinations at a single customer location would thoroughly gut local competition in California. Under SBC's proposal, CLECs would be unable to serve mass-market customers that require more than three DS0s.

SBC takes issue with AT&T witness Pitkin's analysis. Pitkin compares the costs a CLEC would incur in providing UNE-P service with a DS0 loop and in providing service over a DS1 loop. SBC argues that he fails to consider the additional revenues a CLEC could expect to achieve when serving a customer with a DS1 as opposed to serving a customer with multiple DS0s.

⁶⁶ Exhibits 132 and 133.

⁶⁷ See e.g. Ex. 127, (Oberlin - BullsEye), at 2, 12-15.

Hopfenger claims it is wrong to consider UNE-P costs in determining the DS0 cut-off because such an analysis assumes unbundling of local switching, while the FCC intended that the DS0 cut-off be determined *before* deciding whether switching must be unbundled in any particular market. SBC argues that it makes no sense to determine the cut-off based on TELRIC-based UNE-P prices when that cut-off may mean that the UNE-P does not even have to be offered to mass-market customers in a given geographic market. In a post-UNE-P market, SBC believes the appropriate comparison would be between the cost and revenues of serving customers using basic UNE-L and a UNE DS1 loop. The FCC never refers to a cross-over point between UNE-P and DS1 loops. Rather, the FCC's clear directive is to analyze the economic cross-over point between serving customers with multiple DS0 "loops" and serving customers with a DS1 "loop."

Pitkin is asking when it would make economic sense for a CLEC to serve customers through its own switch and a DS1 loop as opposed to using multiple UNE-Ps at TELRIC-based prices. SBC claims that the correct question, however, is at what point, *all else being equal*, a CLEC should elect to serve a customer through a DS1 rather than multiple DS0s. SBC claims that Pitkin's assumption that DS0s would be part of very low-priced UNE-Ps introduces bias and makes his comparison meaningless. SBC argues that one cannot compare TELRIC-based prices to non-TELRIC prices and then claim that unbundling is justified because the non-TELRIC prices are higher.⁶⁸

SBC also faults the AT&T analysis for not including revenues gained by serving a customer over a DS1 loop rather than multiple DS0s. The FCC's rules state:

⁶⁸ *USTA*, 290 F.3d at 424 n.2.

“Specifically, in establishing this ‘cut-off,’ the state commission shall take into account the point at which the *increased revenue opportunity* at a single location is sufficient to overcome impairment and the point at which multiline end users could be served in an economic fashion by higher capacity loops and a carrier’s own switching and thus be considered part of the DS1 enterprise market.”⁶⁹

SBC argues that when a firm is determining the most economic way to provide service to customers it must consider the revenues gained by the various service provisioning methods. Not including potential revenues in the analysis would be analogous to a trucking company comparing the cost of multiple pickup trucks to that of a large tractor-trailer truck, but ignoring the fact that the larger truck has the ability to carry large or heavy cargo that a pickup truck is not capable of hauling, even though that new ability provides opportunities for the firm to gain additional revenues. SBC believes the analysis must take into account the added revenues the CLEC can obtain by providing the higher capacity services that DS1 loops can provide but DS0 loops cannot. The analysis of SBC takes into account both costs and revenues.

Sprint points out, however, that the rule relied on by SBC concerning a potential revenue analysis is only relevant in evaluating a potential deployment case for mass market switching. Since neither SBC nor Verizon have presented a potential deployment case for mass market switching, Sprint argues that SBC’s cutover calculation is unreliable since it is based on a potential deployment analysis that does not apply in this situation. Sprint also disagrees with SBC’s assumption that DS0 customers would be likely to purchase enhanced services.

In addition to the assumption that increased revenues belong in the calculation of the DS0-DS1 cutover, SBC also would add costs of implementing

⁶⁹ 51.319(d)(2)(iii)(B)(4) (emphasis added).

the three geography-specific zone approach specific to SBC's territory whereas Sprint's proposal reflects statewide averages. SBC's model also assumes that non-recurring equipment installation and up-front engineering costs should be recovered over the economic life of the investment. SBC uses a 12% amortization rate for these non-recurring charges, equating to an eight-year recovery period. Sprint claims that such a cost recovery period is too long in a competitive environment where the average customer life is two years.

3. Conclusion of the Staff

Staff concludes that a cross-over point needs to be determined. SBC's proposal, however, is not supported by the record. SBC claims that when determining the cutover threshold, the Commission's calculations should include additional revenues a carrier might collect for providing the additional or enhanced data services that become available when a customer moves from a DS0 to a DS1. SBC cites the FCC Rule 51.319(d)(2)(iii)(4) attached to the TRO in Appendix B in support of its claim that additional revenues should be included in the cutover calculation. Yet, these rules describe the factors the Commission must consider when evaluating a potential deployment case for mass market switching. Neither SBC nor Verizon have presented a potential deployment case for mass market switching here. Thus, SBC's consideration of increased revenues in calculating its four-line DS0-DS1 cutover is without support. In addition to the faulty assumption that increased revenues belong in the calculation of the DS0-DS1 cutover, SBC also would improperly include the additional costs of implementing three geography-specific zone approach specific to SBC's territory,⁷⁰ whereas Sprint's statewide proposal more accurately reflects the competitive realities faced by CLECs in California.

⁷⁰ *Id.* at 5.

SBC also makes a flawed assumption that a customer with four voice lines or more will even want enhanced data services. Many, if not the predominant segment, of the DS0 subscriber market uses DS0s because they meet the needs of the customer; namely, they want and use voice services. SBC's model also incorrectly assumes that non-recurring equipment installation and up-front engineering costs should be recovered over the economic life of the investment. SBC uses a 12% amortization rate for these non-recurring charges, which equates to an eight-year recovery period – an exceedingly long period of time to recover such costs in a competitive environment where the average customer life is two years.

Sprint's analysis provides the best basis for adoption of a DS 0 – DS 1 cross-over point based on a statewide average of 15 lines and up for the DS0-DS1 cutover point.⁷¹ Staff agrees with Sprint that the most straightforward and effective way to establish a DS0-DS1 cutover point is on a statewide basis. Accordingly, staff does not agree with the AT&T proposal to apply different cross over points within the SBC and Verizon territories. The statewide approach recognizes that competitive carriers do not necessarily tailor their market entry plans to specific ILEC territory.

Sprint's calculations included cost components for recurring and non-recurring charges for DS0 loops, the recurring and non-recurring charges of DS1 loops, and the monthly costs of a channel bank installed at the customer's premises used to multiplex multiple voice channels onto a DS1 loop facility. The nonrecurring charges reflect the charges for the initial DS0 loop plus each additional loop ordered.⁷² Sprint's amortization calculations are more

⁷¹ Exhibits 132 and 133.

⁷² Tr. Vol. 143, Dickerson Testimony, 12/12 p. 10-14.

realistically based on the relatively short customer-life experienced in the competitive market, as opposed to SBC's assumption that equipment costs should be recovered over an eight-year term.⁷³

4. DS-0 Cutover Proposal of Verizon

Verizon proposes that mass market customers be defined as those customers actually being served with one or more voice grade DS0 circuits, while enterprise customers be defined as those customers actually being served by DS1 or higher capacity loops. Verizon argues that a fixed cross-over point assuming a pre-determined number of analog lines based on some calculation of average costs, ignores the actual economic choices made by the CLECs and their customers. Verizon argues that the objective behavior of the CLEC should drive the determination of whether or not it "makes economic sense" for that CLEC to serve particular customers over DS1 loops, rather than multiple voice grade DS0 lines.

Verizon argues that the mathematical calculations proposed by Sprint, AT&T, and SBC rely on a theoretical determination of whether it might make sense to serve a customer using multiple analog voice grade loops rather than a DS1 circuit, not whether a CLEC has actually determined that it makes economic sense to do so in any particular case. Sprint witness Dickerson claims that, based on a cost model using Sprint's own average costs (not necessarily the costs of other carriers), "purchasing individual loops is more cost effective than purchasing a single DS-1" whenever there are "15 DS-0s at a customer's location." (Sprint Dickerson Direct at 4) However, if this were true, then a rational CLEC would never use more than 15 analog voice grade loops to serve a single customer – yet they do in California. Verizon presents a Line Count Study

⁷³ *Id.*

broken down by the number of lines at a particular customer's location. Verizon claims that Sprint's "one-size-fits-all" methodology does not capture the economic decisions made by CLECs in the field.

Sprint argues that Verizon's proposal defining the mass market as all DS0 subscribers is self-serving in that it will maximize the countable number of competitive carriers in Verizon's territory and may, therefore, count providers of enterprise switching services as mass market switching providers. Additionally, and most critically, Verizon's proposal ignores the requirements of the TRO. Verizon critiques the other parties' DS0 cutover proposals and recommends the Commission let the market decide because the other parties cannot agree on a number.

The Coalition points out that Verizon has been enforcing the *UNE Remand Order's* three-line cut-off for some time, without any Commission review of its practice. Ex. 127 (Oberlin – BullsEye), at 10; Ex. 164-C, (AT&T – Economides), at 70; TR. 9661, Ins. 6-11 (admitting this practice on cross-examination). As a result, the Coalition argues, CLECs have never really had the opportunity to serve customers with more than three UNE-P lines in Verizon's territory. Thus, the application of Verizon's proposal would, by default, continue to prevent end-users who desire services from CLECs from taking more than three lines under the UNE Platform. Ex. 164-C, at 70. Verizon's enforcement of the three-line cutoff constitutes a major reason why BullsEye – and presumably other CLECs – has chosen not to enter Verizon serving areas. Ex. 127, at 10.

Moreover, the Coalition argues that Verizon's position would create two separate market definitions – one for now and one for the future. Verizon argues that its recommendation for no DS0 cut-off should *only* apply when determining CLECs' current level of service to mass-market customers, but should *not* apply when setting the rules for future CLEC access to the UNE Platform. Verizon's

witness Fulp admitted that Verizon would apply the DS0 cut-off differently now and in the future: no cut-off now in determining whether the trigger has been met but, if the Commission determines that CLECs are still impaired without access to UNE-P, a three-line cut-off for the indefinite future. TR. 9622, Ins. 25-9624, In. 6; *see also*, TR. 9664 In. 28 – TR. 9665, In. 6; Ex. 93-C (Fulp – Verizon), at 15.

5. Conclusion

We conclude that the Sprint approach should apply to Verizon. By adopting Sprint's proposal for a statewide cross-over point, CLECs will be subject to the same cross over point both in the SBC and Verizon territory. Adoption of this statewide cross over point is responsive to parties' concerns about Verizon's proposed treatment.

D. Examination of Mass Market Deployment of Self-Provisioned Switching

1. Background

We next report the results of our investigation concerning mass market deployment on a market-by-market basis. The TRO directed that certain prescribed criteria (i.e., "triggers") be separately applied in each market as the basis for determining where there is no impairment without access to UNE switching in serving the mass market. The data analysis was organized in terms of whether or not a carrier satisfied the deployment criteria outlined by the TRO self-provisioning trigger criteria. The self-provisioning trigger rule states that

[t]o satisfy this trigger, a state commission must find that three or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each are serving mass market customers in the particular market with the use of their own local switches. 47 C.F.R. § 51.319(d)(2)(iii)(A)(1).

Since SBC and Verizon each limited their mass market showing to the self-provisioning trigger, we shall not address the wholesale deployment trigger or the potential deployment test. Consistent with our analysis of market definition, we apply the deployment trigger analysis on a wire center basis. Nonetheless, for comparative purposes, we also show how the trigger deployment analysis would apply under an MSA market definition. Grouping data on an MSA basis also provides a way to compare the deployment trigger results for the relevant wire center markets overlaid within each MSA. We conclude that under either the wire center or the MSA market definition, the level of UNE-L deployment of mass market switching is below the level specified under the trigger criteria for each of the markets examined, both for SBC or Verizon.

2. SBC's Mass Market Trigger Deployment Showing

Within its incumbent service territory, SBC identifies seven MSAs within which it claims that UNE-L deployment of mass market switching meets or exceeds the levels specified by the self-provisioning trigger. As listed in the table below, of the ten CLECs that SBC uses to satisfy the self-provisioning trigger, seven are purportedly UNE-L providers, two are traditional cable companies and one is a cable “overbuilder.” In the table below, the right column shows the number qualifying CLECs claimed by SBC to meet the trigger test within each MSA, as indicated:

SBC Claimed Markets (by MSA) in which Trigger is Met

(Source: SBC-CA, Hopfinger Testimony, Attachment CH-6)

MSA	# Competitors Claimed by SBC
Los Angeles-Long Beach-Santa Ana	10
Riverside-San Bernardino-Ontario	3
Sacramento—Arden-Arcade—Roseville	6
San Diego-Carlsbad-San Marcos	9
San Francisco-Oakland-Fremont	10
San Jose-Sunnyvale-Santa Clara	7
Santa Rosa-Petaluma	3

SBC did not claim that the deployment levels are sufficient to meet the trigger criteria in any MSAs outside of the seven major ones identified above. CLECs provide essentially no mass market UNE-L service in 15 of California's 32 MSAs and Metropolitan Statistical Areas. Ex. 42 (Tardiff Direct) at 8-9. SBC also provided a comparative self-provisioning trigger analysis based on a hypothetical "wire center" market definition utilizing slightly different data from that used in Hopfinger's MSA trigger analysis. SBC's trigger analysis based on the MSA-defined market used mass-market loop data and residential E911 data for cable telephony providers. The E911 data is only available to SBC on a county basis, not on a wire center level basis. Instead of E911 data, therefore, SBC used Local Number Portability (LNP) data for cable telephony providers, in addition to the mass-market loop data that is available on a wire center basis. SBC believes that the use of LNP data understates the number of customers served by cable telephony providers since it ignores customers using telephone numbers from NXX codes directly assigned to the cable telephony provider's switch. To the extent possible, the wire center analysis is formatted in the same manner as data in Hopfinger's MSA market analysis. Hopfinger's supplemental

trigger analysis (Ex. 194/194C) presented SBC’s analysis at a wire-center-level, including cable companies. MCI witness Murray presented a corresponding analysis. The table below shows (in the left column) the total number of wire centers in each MSA and (in the right column) the total number of wire centers within which SBC’s trigger claim applies.

MSA	Total Number of SBC Wire Centers in MSA	Included in SBC Trigger Claim
Los Angeles-Long Beach-Santa Ana	106	62
Riverside-San Bernardino-Ontario	11	1
Sacramento-Arden-Arcade-Roseville	47	8
San Diego-Carlsbad-San Marcos	53	24
San Francisco-Oakland-Fremont	79	36
San Jose-Sunnyvale-Santa Clara	23	10
Santa Rosa-Petaluma	18	1
Total in all 7 MSAs	337	142

Since we conclude that the wire center is the relevant market definition, SBC’s trigger claims would apply only to those wire center markets shown in column 2 above, limited to the wire centers where UNE-L CLECs are actually serving mass market customers with colocated facilities on a UNE-L basis. The remaining wire centers in each of the MSAs do not meet the trigger criteria.

3. Position of CLECs on SBC Mass Market Trigger Showing

a) Reliability of Data Used in Trigger Deployment Analysis

Opposing parties claim that the data used by SBC for its deployment showing is inaccurate, incomplete, and unreliable. Problems are noted particularly with respect to customer location data that would be necessary to determine whether UNE loops serve “mass market” customers. MCI and AT&T, in particular, sought to obtain customer location data from SBC in the Commission’s current UNE costing proceeding. The “Customers Account Billing

System” (CABS) records that SBC was able to provide, however, tended to have limited and/or no customer location data, no zip code information and incomplete and unreliable city names.⁷⁴

SBC’s billing database inaccuracies could lead to counting errors. For example, SBC might count UNE-L providers that obtained nine loops to a single location as three “different” instances where a UNE-L provider obtained three “mass market” loops per location. MCI requested through discovery that SBC supply the CABS data and programming logic used to extract mass market loop data from CABS to determine what, if any, logic SBC used to avoid such false counts. Since SBC failed to provide that information, we cannot determine how many of SBC’s reported mass market loops are really such “false positives.” Given SBC’s reliance on an undisclosed methodology for screening CABS data by address to count mass market loops, many of the supposed mass market loops that SBC reports could possibly be the product of SBC’s own data quality problems.

b) Screening Standards Applicable to Trigger Candidates

In addition to concerns over the unreliability of CABS data, various parties challenge the ILECs’ deployment claims based upon the failure of the alleged trigger candidates to meet certain screening standards. Parties including AT&T, MCI, CalTel, and TURN applied screening criteria to eliminate proposed trigger candidates. As a result of applying the screens, the CLEC parties all claim that the self-provisioning trigger is not satisfied in any of the markets identified by either ILEC. Because of the overlapping nature of the parties’ various proposed

⁷⁴ Ex. 120 (Murray Reply), at 77.

screens, we shall discuss them on a consolidated basis. The most comprehensive list of screening standards was formulated by AT&T.

AT&T applies a list of 11 standards or screens to be met in order for a candidate to qualify as meeting the trigger criteria. AT&T argues that if these screens are not met, then the claimed competitors do not truly serve the mass market on a UNE-L basis. AT&T's criteria are as follows:

(1) Unaffiliated with the ILEC or with any other trigger candidate

TRO ¶ 501 requires that the trigger candidates cannot be affiliated with each other or with the ILEC. Affiliation is defined as 10% or greater ownership interest by one carrier in the other.

(2) Offering basic telephone service to new customers using its own switch

TRO ¶ 500 requires that each trigger candidate be “currently offering and able to provide service and likely to continue to do so.” A trigger candidate that is only serving some analog “legacy” customers (those won earlier) would not be indicative of actively seeking or able to expand its customer base.

(3) Offering service to both residential and small business customers.

Both SBC and Verizon include several CLECs in their count of mass market triggers that do not actively market services to residential customers. The CLECs, TURN and others argue that any carrier not actively seeking to provide competitive services to the residential sector of the mass market should not qualify as a trigger candidate.

(4) Offering Service Ubiquitously

AT&T argues that in order to serve the mass market in a meaningful way, the trigger candidate must be serving the mass market ubiquitously.

(5) Serving more than just a niche market

AT&T argues that a CLEC serving only a particular niche of the mass market does not constitute evidence of serving the mass market generally. Because the economic impairment test under the *TRO* assumes the efficient CLEC can only expect to earn “the typical revenues gained from serving the average customer” in the mass market.⁷⁵ AT&T argues that this principle

⁷⁵ *TRO* ¶ 472.

must be applied by requiring a trigger candidate to serve the mass market generally.

(6) Serving more than just a de minimus number of mass market customers

Several CLECs argue that CLECs should not count toward the trigger if they serve no more than a de minimus share of mass market customers in a given market.

(7) Offering service equal in cost, quality and maturity to that of the ILECs.

The TRO requires that we consider whether a CLEC providing intermodal competition (i.e., not relying on ILEC loops and circuit switching) offers service that is equivalent to the ILEC's offering in cost, quality and maturity.⁷⁶ AT&T argues that requirement must also reasonably apply to a carrier using UNE-L and its own switch since a carrier providing inferior services or higher-cost services than an ILEC offers does not provide evidence of overcoming impairment.

(8) Likely to continue actively serving the mass market using its own switch.

TRO ¶ 500 prescribes that states should examine “whether the providers are currently offering and able to provide service, and are likely to continue to do so.” MCI witness Murray testified that three of SBC's claimed triggering companies are not active and continuing market participants providing UNE-L based service to mass-market customers. A third company confirmed to MCI that it is no longer taking on new UNE-L mass-market customers. Xpedius is not even certificated to provide service in California and does not, in fact, provide local service to mass-market customers anywhere in the state. Thus, the Pure UNE-P Coalition argues that there is no basis for the Commission to count Xpedius toward satisfaction of the self-provisioning trigger.

(9) Carriers Using Switches to Serve Predominantly Enterprise Customers

AT&T argues that a CLEC serving predominantly enterprise customers with its own switch should not count as a trigger candidate, arguing that “switches serving the enterprise market do not qualify for the triggers.”⁷⁷

⁷⁶ TRO ¶ 97, 499, and n. 1549.

⁷⁷ TRO ¶ 508.

(10) Offering service as more than an incidental part of its business plan.

AT&T argues that a CLEC that provides basic local exchange service only as an incidental part of its business plan is not serving the “mass market.” This standard is essentially a restatement of, or overlapping with, Standards 3, 4, and 9. AT&T argues that a carrier offering only such incidental service does not offer evidence of generally having overcome impairment in serving the mass market.

MCI applied a more limited set of screens to the trigger candidates on a wire center basis as well as an MSA basis. MCI’s screens lead to disqualification of all the trigger candidates, both for SBC and Verizon. The effects of each MCI proposed screen on the trigger candidates is set forth in Confidential Attachment TLM-R7 to Exhibit 120 C (Murray Reply Testimony). With the exception of two triggering companies that gave permission to state publicly that they are not active and continuing participants self-deploying switching to serve mass-market customers in California, MCI does not identify specific company names in its discussion of the trigger screens.⁷⁸

The first screen applied by MCI witness Murray captures data anomalies,⁷⁹ removing for each wire center any CLEC that had fewer than 5 lines in that wire center, and eliminating inactive CLECs from consideration (see the “Only Active CLECs” column). Murray then screened out all remaining companies that do not offer residential service via UNE-L. After this screen was applied, no wire centers remained in which there were at least three UNE-L competitors. The second map included in Attachment 1, “Active UNE-L Providers Serving

⁷⁸ Attachment TLM-R7 to Murray’s reply testimony provides a nonredacted discussion of the information she gathered on the remaining potential triggering companies and explains in more detail the basis on which she excluded specific carriers

⁷⁹ SBC included wire centers for which it reported no retail lines (but at which CLECs purportedly do have lines). Murray removed these wire centers from consideration in her trigger analysis.

Residential Customers,” depicts the number of UNE-L CLECs remaining after this series of screens by wire center.

Although no wire centers remained with three triggering companies, Ms. Murray applied her final screen requiring that each trigger candidate had achieved at least a 1% market share within a wire center (in addition to the earlier screens). MCI applied this screen to ensure that the claimed triggering CLEC has achieved sufficient market penetration to demonstrate by its scale and scope some success in overcoming economic and operational barriers to entry. The third map in Attachment 1, “Active UNE-L Providers With At Least 1% Market Share that Serve Residential Customers,” shows that few wire centers remain in which there is even *one* CLEC that passed all of the MCI screens applied.

4. Conclusions of the Staff Concerning Mass Market Switching Deployment

a) Applicability of Screening Criteria

As a basis to evaluate the data concerning deployment of mass market switching by CLECs, we first address the dispute over the applicability of screening criteria. The ILECs characterize opposing parties’ proposed screens as violating the TRO’s intent to administer the trigger test using “bright line” rules “keyed to objective criteria” that allow state commissions to “avoid the delays caused by protracted proceedings and can minimize administrative burdens.” *TRO* ¶ 498. The ILECs argue that there is no discretion under TRO trigger rules to apply screening of the sort proposed by opposing parties in determining if a given CLEC meets the mass market switching deployment trigger criteria. Because neither SBC nor Verizon presented a mass market switching potential deployment case, they argue that under the TRO, economic and operational

criteria are not relevant as a basis to screen out CLECs that otherwise qualify as trigger candidates.

We agree that while the TRO did not contemplate or provide for a comprehensive study of every competitive issue that may be of concern to a particular CLEC, any meaningful review requires that reasoned judgment be applied as to the validity and integrity of the reported data. While the TRO provides a “bright-line” test with respect to the qualifying number of trigger candidates, and impairment findings, various criteria and principles still must be interpreted, examined, and applied in order to evaluate claims as to whether a particular competitor is in fact serving the mass market on a UNE-L basis.

We conclude that certain screening criteria are warranted as a means of defining and detecting valid competitors that are serving the mass market on a UNE-L basis. We shall apply the screening criteria as identified below in reaching our findings concerning the extent of UNE-L deployment in serving the mass market. On a factual basis, there is little or no dispute concerning whether the screening criteria accurately describe the carriers to whom they are applied. The dispute, instead, focuses on whether, as a policy matter, such criteria are relevant in making findings concerning whether a particular carrier meets the test as a trigger candidate, and should consequently be counted as a CLEC serving the mass market on a UNE-L basis.

Because most of the ILECs’ candidates would be disqualified from counting toward the trigger under more than one of the multiple screens proposed by AT&T, its proposed screens are somewhat redundant. As such, in determining whether a carrier qualifies as counting toward the trigger criteria, we find it sufficient to limit our consideration to the screens identified by MCI. As determined below, the MCI screens provide an appropriate basis for identifying CLECs serving the mass market on a UNE-L basis. The MCI trigger

screens disqualify all wire centers in which each of the ILECs claim the trigger test is met.

SBC's initial presentation of data did not permit cable telephony providers to be included explicitly in MCI's preliminary wire-center analysis. This data problem did not affect the MCI results, however, because the screens eliminate cable providers based in part on the "cost, quality and maturity" criteria, as well as the lack of evidence concerning the ability of competitors to access the ILECs' loops. An additional rationale for eliminating cable telephony providers in the MSA version of the analysis is the criterion requiring service to "all or virtually all customers" because cable providers lack geographic ubiquity. MCI draws no definitive conclusion about geographic ubiquity of cable telephony service for each and every wire center.

Even if cable telephony providers were *not* screened out of the wire-center analysis, however, MCI's other screens indicate that so few UNE-L providers present real choices to consumers that the inclusion of cable providers in the wire center analysis would not change its results.

SBC subsequently provided MCI with information concerning the cable telephony providers, so that the final results of applying MCI's proposed screens with respect to SBC trigger candidates include cable companies. As each progressive screen is applied, the self-provisioning trigger is met in a declining number of wire centers. With application of the final screen, no wire centers remain in which the trigger is met. The effects of the MCI screens on SBC's trigger candidates are set forth below. For purposes of comparison, the analysis is first presented in the context of SBC's proposed MSA market definition:

Application of Screens to SBC Trigger Candidates (MSA Basis)

MSA	Number of Triggering CLECs				
	SBC Trigger Claim ⁸⁰	Only Active CLECs	Only Active CLECs that Serve Residential	Only Non-Cable Active CLECs that Serve Residential	Only Non-Cable Active CLECs with $\geq 1\%$ Market Share that Serve Residential
Los Angeles-Long Beach-Santa Ana	10	9	5	2	0
Riverside-San Bernardino-Ontario	3	3	1	1	0
Sacramento-Arden-Arcade-Roseville	6	5	1	1	0
San Diego-Carlsbad-San Marcos	9	8	4	2	0
San Francisco-Oakland-Fremont	10	8	3	1	0
San Jose-Sunnyvale-Santa Clara	7	5	1	0	0
Santa Rosa-Petaluma	3	3	2	1	0

The result of applying the MCI screens based upon wire-center markets is set forth in the next table, showing the remaining wire centers that have at least three UNE-L CLECs after each of MCI's proposed screens are applied.⁸¹

⁸⁰ SBC screened out CLECs from wire centers in which they have less than 5 lines.

⁸¹ Ex. 120C, Attachment TLM-R10 (proprietary) provides the results underlying Table 1.

**Application of Screens to SBC Trigger Candidates
Including SBC's Claimed Cable Triggers⁸²
(Wire Center Basis)**

MSA	Total Number of SBC Wire Centers in MSA	Number of SBC Wire Centers With at least 3 CLECs					
		Included in SBC Trigger Claim	CLECs that Own Switches and are Unaffiliated ⁸³	Only Active CLECs with ≥ 5 Loops ⁸⁴	Only Active CLECs that Serve Resid.	Only Active UNE-L CLECs that Serve Resid.	Only Active UNE-L CLECs with ≥ 1% Market Share that Serve Residential
Los Angeles-Long Beach-Santa Ana	106	62	65	57	4	0	0
Riverside-San Bernardino-Ontario	11	1	2	1	0	0	0
Sacramento-Arden-Arcade-Roseville	47	8	8	8	0	0	0
San Diego-Carlsbad-San Marcos	53	24	24	24	7	0	0
San Francisco-Oakland-Fremont	79	36	34	21	0	0	0
San Jose-Sunnyvale-Santa Clara	23	10	9	7	0	0	0
Santa Rosa-Petaluma	18	1	1	0	0	0	0
Total in all 7 MSAs	337	142	140	118	11	0	0

**b) Review of Mass Market Switching Deployment Data
by Region**

We summarize below the results of the self-provisioning switch deployment analysis after applying the trigger screens to the specific trigger candidates in each of the seven major MSAs in the SBC service territory. By applying the screens as discussed below, we find that the trigger criteria for switch deployment are not met in any market, whether defined on an MSA or wire center basis.

⁸² Ex. 195C.

⁸³ Excludes CLECs that do not own their own switches. Combines CLECs that are affiliated with each other.

⁸⁴ Excludes CLECs that are no longer active. Also excludes CLECs with fewer than 5 lines in a wire center. Although SBC excluded UNE-L CLECs with fewer than 5 lines in a wire center, it did not exclude cable companies with fewer than 5 lines in a wire center.

In the LA MSA, SBC claims there are 10 qualifying trigger candidates. Based on our wire center market definition, SBC's claimed trigger would apply in 55 out of the 106 SBC wire centers in the MSA. The trigger candidates include three cable telephony providers serving customers using their own switches and loop facilities. The only non-cable CLEC serves both residential and small-business customers in the LA MSA with its own switch, and markets only to, and predominantly serves, the market niche of primarily-Spanish-speaking customers. Ex. 164-C (Economides – AT&T), at 28-30.

In the Riverside MSA, SBC identifies three trigger candidates. Based on our wire center market definition, SBC's claimed trigger would apply in only one out of the 11 SBC wire centers. None of the three trigger candidates provide basic local service to residential customers anywhere in the Riverside MSA. Ex. 164-C (Economides – AT&T), at 38-39. Moreover, one of the claimed carriers does not provide UNE-L service in over 72% of the wire centers, and a second does not provide UNE-L service in over 80% of the wire centers. Its three nominated CLECs' combined UNE-L market share is less than two-thirds of one percent (.65%) within the MSA.

Of the six nominated triggers in the Sacramento MSA, their combined UNE-L market share is less than one-third of one percent. Thus, the only evidence of record does not show that nominated CLECs serve more than a "part of the market" (*TRO*, n. 1552).

The trigger candidates claimed in the San Diego MSA are the same seven non-cable CLECs that SBC nominated in the LA MSA. As noted above, six of them do not provide basic local service to residential customers. One of the candidates is the same CLEC previously counted in the LA MSA that focuses its marketing and service almost exclusively on customers whose primary language

is Spanish, and who prefer the in-person bill-payment and service in which this CLEC specializes.

The trigger candidates in the San Francisco (SF) MSA are composed of two cable telephony providers and eight other CLECs. Of the eight non-cable CLECs as trigger candidates nominated by SBC in the SF MSA, however, five are the same as those nominated in the LA and Sacramento MSAs, none of which offer residential service. Moreover, none of the remaining noncable providers offer residential service within California. Ex. 164-C (Economides – AT&T), at 47, 49-50. The vast majority of cable CLEC lines in the SF MSA are provided by Comcast which, according to its local exchange tariff, provides local telephone service in the San Francisco MSA only in a portion of the town of Fremont.⁸⁵ The other cable telephony provider SBC nominated as a trigger candidate, RCN, states on its website that its local service offered within the SF MSA only covers selected regions. SBC provided no evidence that either Comcast or RCN use their cable telephony switches to access SBC's UNE loops as a means of providing local phone service in the MSA. Thus, the presence of neither cable CLEC provides any evidence that new CLEC entrants can overcome the operational and economic barriers to providing local service through the use of their own switches and SBC's loops, which the FCC designated as the focus of the impairment inquiry delegated to state commissions. *TRO*, ¶ 440.⁸⁶

⁸⁵ See Opening Brief of Pure UNE-P Coalition, Attachment B, Comcast Phone of California, LLC, Schedule Cal. P.U.C. No. 1, Section 1.2 ("Service Maps"), *see especially* Original Cal. P.U.C. Sheet No. 19-T.

⁸⁶ Comcast is not currently promoting cable telephony at all and, in fact, is consciously allowing its local service market share to decline while awaiting further development of voice-over-internet-protocol service ("VOIP") technology. Ex. 164-C (Economides – AT&T), at 32-34.

In the Santa Rosa MSA, SBC identified as triggers two non-cable CLECs, ATG and MPower, and cable CLEC Comcast. As discussed above in connection with the SF and LA MSAs, neither ATG nor MPower provide basic local service to residential customers. As also discussed above, Comcast by tariff limits its provision of local service to “residence customers” only. Attachment B hereto, at Sheet No. 18-T. Therefore, they do not serve “each group of customers” within the mass market through the use of their own switches and SBC’s UNE loops. SBC has presented no evidence that any of the three CLECs nominated as trigger candidates in the Santa Rosa MSA provide UNE-L-based local service throughout the MSA’s geography.⁸⁷ There is no basis to conclude that at least three CLECs provide local service throughout the geography of the Santa Rosa MSA with their own switches.

c) Review of Individual Candidates Claimed to Meet Trigger Criteria

In this section, we review each of SBC’s proposed trigger candidates, together with reference to the screens as proposed by AT&T and MCI that apply to each candidate. To the extent these screens are incorporated into the MCI analysis that we apply above, they lend support to our findings that the trigger test has not been satisfied in any market.

Advanced Telecom Group (ATG)

ATG is identified as a switch-based self-provider to mass market customers in the SF and SR MSAs. ATG does not meet Standards 3,4, and 6.⁸⁸ ATG serves only business customers, and serves only a de minimus part of the MSA.

Allegiance Telecom

⁸⁷ With regard to the geographic coverage of SBC’s nominated cable CLEC, Comcast, *see* n. 29, above.

⁸⁸ The Standard numbers refer to the list of screening criteria enumerated by AT&T, as discussed previously.

Allegience is a trigger candidate in markets in every MSA at issue except for the SR MSA. Because Allegience is being acquired by XO, it is expected either be an affiliate of XO or cease to exist as a separate company in the near future. Allegience thus does not meet either under Standard 1 (if it becomes an affiliate of XO), or Standard 2 and 8 (if it simply ceases to exist). Allegience also does not meet Standards 3, 4, and 6.

AT&T

AT&T is a trigger candidate in markets in every MSA at issue except for the SR MSA. AT&T does not meet Standards 2-4, 6, 9, and 10.

Comcast, Cox and RCN Cable Companies

Comcast, Cox, and RCN are all cable telephony providers. Comcast is identified as a trigger candidate in markets in all MSAs except Sacramento and Riverside. Comcast is screened out under Standards 4, and 6-9. Cox is a candidate only in the LA and San Diego MSAs. RCN is a candidate only in the LA and SF MSAs. Cox and RCN are screened out under Standards 4, 6, and 7.

ICG

ICG is a trigger candidate in the LA, Sacramento, San Diego, and San Jose MSAs. ICG is screened out under Standards 2-4, 6, and 11.

Mpower

Mpower is a trigger candidate in every MSA at issue except San Jose. Mpower is screened out under Standards 4,6, and 7.

Pointe Comm, Inc.

Pointe Comm (aka Telscape) is a trigger candidate in the LA and San Diego MSA. Pointe Comm is screened out under Standards 4, 5, and 6. Telscape serves only a niche market that focuses solely on Spanish-speaking households, and makes no effort to serve the mass market outside of this narrow niche.

TelePacific Communications

TelePacific Communications (TelePacific) is not an active and continuing participant in the market. Current mass-market customers that TelePacific serves via UNE-L are, by tariff, grandfathered customers. TelePacific does not permit these customers to add lines to their existing services, and does not accept new customers.⁸⁹ Thus, given the lack of availability of its service to new customer lines, TelePacific is no longer using its own switch in “actively providing voice service to mass market customers in the market....”⁹⁰

MCI

MCI is nominated as a trigger candidate in five MSAs: LA, Sacramento, San Diego, SF, and San Jose. MCI relies on UNE-P as its predominant means of serving mass-market customers located within those MSAs. The evidence is ambiguous as to whether MCI actually provides service to any mass market customers using its own switch. In any event, MCI serves only a de minimus number of mass market lines either on an absolute basis or as a percentage of market share.

XO Communications

SBC nominated XO Communications (XO) as a switch-based self-provider serving the mass market in the Los Angeles, Sacramento, San Diego, San Francisco, and San Jose MSAs. XO does not serve residential customers.⁹¹ XO confirmed that it specifically targets businesses with 10 or more lines.⁹² Thus, assuming the mass market is defined based on a DS0 cross-over point of 10 lines or fewer, any customer locations served by XO with fewer than 10 lines per customer would be merely incidental to XO’s business plan. Also, XO serves only a de minimus number of mass market lines either on an absolute basis or as a percentage of market share.

⁸⁹ TelePacific Tariff CLC 3-T.

⁹⁰ TRO § 499.

⁹¹ Ex. 164, Economides Testimony, 1/16/04, 36:13-18.

⁹² Id.

Xpedius

Although Xpedius was not a respondent to the Commission's data requests, SBC claimed the company as counting toward the trigger. witness Murray contacted a representative of Xpedius and was granted permission to state publicly that Xpedius is *not* certificated and does not offer local service in California.

d) Principles Underlying Adopting Screens Applied to Trigger Candidates

For the reasons discussed below, we conclude that following screening standards should be applied in identifying and screening proposed trigger candidates.

(1) Carriers Not Serving Residential Customers

Trigger candidates cannot truly be counted as serving the mass market if they fail to provide service to any residential customers. Thus, we find that the residential trigger screen is reasonable to apply in confirming whether a CLEC serves the mass market. As a basis for counting as a trigger candidate, the FCC requires the CLEC to have the "ability to serve each group of customers" within the relevant geographic market.⁹³ Mass market customers, by definition, constitute both residential and small business customers served using DS0 (voice grade) lines.⁹⁴ The majority of mass market customers are, in fact, residential.

AT&T witness Economides states, "a trigger analysis that relied primarily on evidence of competing switch providers that serve only small business lines (with average revenues exceeding those of all mass market customers on average) would not provide an economically rational view of the impact of a determination that the trigger is met for the mass market as a whole, which

⁹³ TRO at ¶ 495.

⁹⁴ *Id.*, ¶ 127.

predominantly includes residential customers.”⁹⁵ The ILECs, however, claim that such a restriction on the definition of serving the mass market is unwarranted. SBC argues that any requirement that a trigger candidate serve residential customers constitutes a carving up of the “mass market” into separate segments.

We agree that the mass market should not be segmented into separate residential and business niches for purposes of defining markets. By the same token, however, the adopted market definition should be followed in applying the triggers. Thus, if the trigger is deemed satisfied by a carrier serving only the small business customer segment, but not the residential customer segment, there is an inconsistency between market definition and trigger application. The trigger cannot reasonably be satisfied by a standard that only applies to one limited niche of the mass market.

Since the mass market is defined to consist of both residential and small business customers, residential customers must be considered in determining whether the market is actually being served. We cannot assume the fiction that serving only a niche of small business customers signifies that both residential and small business customers are being served. The FCC recognized both similarities and differences between small business and residential customers in drawing distinctions between the “mass market” and “enterprise market,” noting:

Very small businesses typically purchase the same kind of services as do residential customers, and are marketed to, and provided service and customer care, in a similar manner. Therefore, we will usually include very small businesses in the mass market for our analysis. We note, however, that

⁹⁵ AT&T, Direct Testimony of Nicholas Economides, pp. 58-59.

there are some differences between very small businesses and residential customers. For example, very small businesses usually pay higher retail rates, and may be more likely to purchase additional services such as multiple lines, vertical features, data services, and yellow page listings. Therefore, we may include them with other enterprise customers, where it is appropriate in our analysis.⁹⁶

The FCC discussion illustrates the principle that small business customers, if served in isolation apart from residential customers, could potentially be viewed as an adjunct to the enterprise market rather than the mass market. In any case, the FCC's footnote supports the view that small business customers cannot blindly be assumed to be always interchangeable with residential customers as a basis to find that a prospective trigger candidate is serving the "mass market."

The ILECs also object to the residential service criteria as an indicator of serving the mass market, arguing that it conflicts with the TRO Errata to Paragraph 499. The FCC, in Errata to the TRO deleted the language in paragraph 499 of the TRO requiring that a trigger candidate "should be capable of economically serving the entire market, as that market is defined by the state commission. This prevents counting switch providers that provide services that are desirable only to a particular segment of the market." *See Errata* at 2. The FCC also deleted the requirement that a self-provisioner "be operationally ready and willing to provide service to all customers in the designated market." *Id.* SBC interprets these corrections as prohibitions on state commissions segmenting the mass market into various sub-classifications, including residential, when

⁹⁶ TRO, n. 432.

applying the trigger.⁹⁷ Verizon witness Taylor argues that nothing in economic theory or in the TRO requires that entrants serve a market ubiquitously in order to demonstrate that market entry is feasible and sustainable.

The ILECs' interpretation of the significance of the TRO Errata requires a logical leap that is not supported by the TRO. Although the FCC removed language requiring that a trigger candidate must be "capable of economically serving the entire market," such removal could not reasonably imply the opposite extreme, namely that a candidate may qualify as a trigger candidate by serving *no* residential customers at all. We do not interpret the Errata to imply that a trigger candidate can simply serve only isolated or disconnected patches of customers, entirely ignoring the predominant residential sector, and still count as serving the mass market. The FCC Errata cannot support an interpretation that would render the trigger meaningless. The TRO, itself, cited coverage of less than 3% of residential lines by CLECs as evidence that few local switches have been deployed to serve the mass market.⁹⁸ We thus cannot reasonably assume a zero percentage residential market coverage could reasonably be construed as serving the mass market.

(2) Serving More Than a De Minimis Market Share

Various parties argue that if a CLEC only serves a very small portion of the market, such CLEC is not operationally ready and willing to serve the mass market, and should not count toward the trigger.⁹⁹ AT&T suggests a threshold between 3% and 5% (Ex. 164 (Economides Reply) at 18), but isn't sure (Tr. 10625-

⁹⁷ Similarly, SBC disagrees with CLECs' assertion that Telescape should not count towards the trigger because it targets the Spanish-speaking segment of the mass market. Ex. 164 (Economides Reply) at 28.

⁹⁸ TRO ¶ 438.

⁹⁹ TRO, ¶ 499.

26 (Economides)). MCI proposed a 1% per carrier threshold that is just above the market share of most the self-provisioners, according to MCI. *See* Ex. 120 (Murray Reply) at 73. TURN proposes 3%. Ex. 128 (Curry Reply) at 33.

SBC witness Hopfinger excluded competitors from the trigger analysis when the data showed fewer than five qualifying unbundled loops in a particular wire center. Hopfinger excluded such loops from his analysis to reasonably assure that CLEC test lines or administrative lines were not counted.¹⁰⁰ SBC, however, used other carriers in its trigger count that serve well below three percent of the market. In Verizon's case, several competitors were included that serve only one or two customer lines in a given wire center.¹⁰¹ Various parties argue that such de minimis occurrences should be excluded from the count of competitive switching units.

As graphically illustrated in AT&T witness Economides' reply testimony, at Table 1 (Ex. 164-C, at 21), the *combined* UNE-L market share of all seven non-cable CLECs that SBC nominated as trigger candidates is slightly more than 1%.¹⁰² (see AT&T Opening Brief, Table 1, pg. 52). Various parties argue that such a de minimus market share is not sufficient to constitute a finding that the triggers are satisfied. In this regard, the FCC noted, "[f]or example, if the marketplace evidence shows that new entrants have deployed a certain type of facility, we will consider the facts as evidence that the barriers to entry in that market for that element are surmountable. In deciding what weight to give this evidence, we will consider how extensively carriers have been able to deploy

¹⁰⁰ SBC-CA, Direct Testimony of Curtis Hopfinger, p 42.

¹⁰¹ Verizon response to MCI Data Request 4-1.

¹⁰² Moreover, this calculation assumes that every line SBC counts in its evidence in fact serves a mass-market customer. AT&T argues that the actual number of UNE-L lines that CLECs are using to serve mass-market customers with their own switch is considerably smaller than the figures SBC presented.

such alternatives to serve what extent of the market, and how mature and stable that market is.”¹⁰³

We disagree with the ILEC’s claim that a CLEC can qualify as a trigger candidate while serving only a de minimus portion of the market. As we discussed in connection with market definition issues, the ILECs’ showing displays a conceptual inconsistency between how they define the market (based on broadly assumed economies of scale) and how they apply the triggers (based upon narrow actual area served). Particularly if the market were to be defined as broadly as an MSA, it would produce anomalistic results to infer that a CLEC candidate serving only a de minimus share of customers within a small area within an MSA qualified as a trigger for the entire MSA. AT&T witness Economides provides support for a de minimis exclusion with the example of the FCC, when presented with claims that there were three million residential lines using competitive switches (less than 3 percent of residential voice lines), the FCC concluded that this small percentage of lines does not demonstrate a lack of impairment.¹⁰⁴

While parties differ in terms of a specific threshold of market share, their proposals all hover in the 1% to 5% range. Since we have defined the market as a wire center, the risks of counting as a trigger a CLEC serving only a de minimus share of a much broader market is somewhat mitigated. Moreover, even adopting a market share threshold as low as 1% still is sufficient to capture the intended effect of screening out carriers with a de minimus market share. Thus, we conclude that a 1% minimum market share screen for each carrier is

¹⁰³ *Id.*, ¶94.

¹⁰⁴ TRO, ¶¶438-440.

reasonable to avoid counting carriers that do not truly serve mass market customers throughout the market in question.

(3) Cable Telephony Providers as Trigger Candidates

SBC¹⁰⁵ and Verizon¹⁰⁶ both include “intermodal” competitors (i.e., cable companies)¹⁰⁷ in their counts of CLECs meeting the switch triggers. MCI,¹⁰⁸ AT&T,¹⁰⁹ and TURN argue, however, that cable telephony providers should *not* be counted toward the mass market trigger.

The TRO does permit inclusion of intermodal providers to count toward the trigger, providing that such providers offer “service comparable in quality to that of the incumbent LEC.”¹¹⁰ Yet, the FCC tempered its recognition of intermodal carriers as possible switching alternatives, cautioning that “although the existence of intermodal switching is a factor to consider ... the limited use of intermodal circuit switching alternatives for the mass market is insufficient for us to make a finding of no impairment in this market, especially since these intermodal alternatives are not generally available to new competitors.”¹¹¹

With respect to cable networks, the TRO finds that they were “built for other purposes, often under government franchise, and therefore have first-mover advantages and scope economies not available to other new entrants.”¹¹² The cable not only self-provides its switch but also its loops. The TRO

¹⁰⁵ SBC- Direct Testimony of Curtis Hopfinger, p. 36.

¹⁰⁶ Verizon- Direct Testimony of Orville Fulp, pp. 23-25.

¹⁰⁷ FCC Rule 51.5 defines “intermodal” as “facilities or technologies other than those found in traditional telephone networks, but that are utilized to provide competing services. Intermodal facilities or technologies include, but are not limited to, traditional or new cable plant, wireless technologies, and power line technologies.”

¹⁰⁸ MCI, Direct Testimony of Terry Murray, pp 67-69.

¹⁰⁹ AT&T, Direct Testimony of Nicholas Economides, pp 59-63.

¹¹⁰ TRO at Appendix B, Page 21, Rule 319(d)(2)(iii)(A)(1).

¹¹¹ TRO at ¶ 443.

¹¹² TRO at ¶ 98.

recognized that “when one or more of the three competitive providers is also self-deploying its own local loops, this evidence may bear less heavily on the ability to use a self-deployed switch as a means of accessing the incumbent’s loops.”¹¹³ This strategy is only available to the single franchised cable company, but not to any other entrant. Therefore, the existence of the cable company’s telephone service does not provide evidence of an entrant’s ability to access the incumbent LEC’s wireline voice-grade local loop and thereby self-deploy local circuit switches.¹¹⁴ On that basis, TURN argues that cable companies should not be counted as mass market switch triggering carriers. MCI likewise argues that cable telephony is at most an alternative to the ILEC’s local voice service for the specific customer locations served via the cable company’s facilities, which typically do not reach all of the ILEC’s mass-market customer locations.

These limitations apply to the two traditional cable providers and one “overbuilder” that SBC cites as triggering carriers.¹¹⁵ None of these competitors provides local exchange service to mass-market customers throughout the MSAs. Even if they were to expand and provide telephony service everywhere within their cable footprints, these carriers do not self-deploy alternative loop facilities throughout the claimed MSAs.¹¹⁶

¹¹³ TRO n. 1560.

¹¹⁴ TRO at ¶ 98 and ¶ 446.

¹¹⁵ Ex 50C (Hopfinger Direct), Attachment CH-7.

¹¹⁶ Witness Murray was unable to locate an information source that would provide clear delineations of the precise areas in which cable telephony service is available in California. MCI argues, however, that there is no reason to believe that the areas in which cable telephony service is available would coincide in any particular way with wire center boundaries. Therefore, MCI claims it is unlikely that cable telephony providers ubiquitously offer service throughout each of the wire centers in which they happen to provide service to mass-market customers.

MCI witness Murray testified that although SBC's data do not permit cable telephony providers to be included explicitly in her wire-center analysis, her proposed screens still eliminate cable providers based in part on the "cost, quality and maturity" criteria, as well as the lack of probative evidence concerning the ability of competitors to access the ILECs' loops. For example, the emergency battery power for E911 service is significantly lower on cable lines than on traditional telephone lines.¹¹⁷

An additional rationale for eliminating cable telephony providers is because such providers offer service only in limited regions. AT&T notes that cable companies only provide telephone service in a subset of their cable television territory, which excludes large numbers of mass market customers from having a competitive alternative.¹¹⁸ Murray presents insufficient information to draw a definitive conclusion about geographic ubiquity of cable telephony service for each and every wire center. Murray argues, however, that even if cable telephony providers were *not* screened on a wire-center basis, so few UNE-L providers present real choices to consumers that the inclusion of cable providers in a wire center analysis would not change the results.

Moreover, one of the cable companies that SBC claims as a triggering company does not own the switches it uses, although it uses switches from a third party that is not an ILEC.¹¹⁹ Paragraph 499 of the *Triennial Review Order* indicates that companies counted toward the retail trigger must be "using or offering their own separate switches." In a footnote to that paragraph, the FCC

¹¹⁷ Ex. 164C, Economides Testimony 1/16; 32:9-12.

¹¹⁸ Ex. 164C Economides Testimony 1/16; 30: 6-15.

¹¹⁹ See Exs. 120C and 123C.

describes the only instance in which a company that does not own the switches in question may be counted toward the retail trigger:

While the record indicates that competitors do not currently purchase wholesale switching from non-incumbent-LEC providers, we find, for the limited purposes described herein, that *if a carrier were to acquire the long term right to the use of a non-incumbent-LEC switch sufficient to serve a substantial portion of the mass market*, that carrier should be counted as a separate, unaffiliated self-provider of switching.¹²⁰

MCI argues that neither SBC nor Verizon demonstrated that the cable provider has a “long term right” to use the switches in question, and did not show that the switch capacity is “sufficient to serve a substantial portion of the mass market.”

Accordingly, in view of the limitations and restrictions associated with the cable telephony trigger candidates, staff concludes that they do not meet the TRO trigger requirements for the reasons outlined above. Staff shall apply as a screening criteria the exclusion of cable telephony providers as trigger candidates.

(4) Switches owned or operated by ILECs or their affiliates.

TURN argues that competitive service providers that are affiliated with, or owned by ILECs have many of the same unique characteristics that cable companies have. ILECs have switches that serve incumbent franchise territory, and therefore, enjoy the benefits of economies of scope not available to new entrants. If these ILECs have a rural exemption to the provision of UNEs, they also have a protected monopoly franchise that provides them with a secure base of operations to expand into other services. Such a secure base is not available to

¹²⁰ *Triennial Review Order*, ¶ 1551, emphasis added.

competitive carriers. For these reasons, TURN excludes these types of ILEC - CLEC affiliates from its trigger count.

In a relevant example concerning switch deployment, the FCC indicates that the evidence that most residential lines served by competitive switches are served by large, independent ILECs expanding into adjacent areas, and therefore “much of the deployment relied upon by the BOCs in fact provides no evidence that competitors have successfully self-deployed switches as a means to access the incumbents’ local loops...”¹²¹ We agree with TURN that ILEC -CLEC affiliates should be excluded from the trigger counts.

5. Verizon’s Mass Market Trigger Case

a) Position of Verizon

Verizon claims that the FCC’s mass market self-provisioning trigger is satisfied in three MSAs, each constituting a separate market: Because there are currently few wholesale providers of switching, other than ILECs, Verizon did not make a showing under the competitive wholesale facilities trigger for switching, but relied instead on the self-provisioning trigger.

Verizon compiled its trigger analysis using: internal billing databases (“Line Count Study”)¹²² and the E911 database.¹²³ The Line Count Study identified DS0 voice grade lines leased from Verizon by CLECs without using a UNE-P arrangement. The E911 database identified residential customers served by carriers that bypass Verizon’s network altogether. Verizon compared its data compilation with data submitted by CLECs in response to the Commission’s

¹²¹ TRO, ¶ 440.

¹²² Fulp Direct (Ex. 93C) at 20-22.

¹²³ Fulp Direct (Ex. 93C) at 20 (line 10-13).

discovery. Based on its line count study, Verizon tallied the following count of carriers that satisfy the self-provisioning mass market trigger:¹²⁴

MSA	Number of Trigger Candidates
Los Angeles-Long Beach-Santa Ana	7
Riverside-San Bernardino-Ontario	4
San Francisco-Oakland-Fremont	3

The following table shows the corresponding wire center markets within which the self-provisioning trigger is claimed to be met based on the data compiled by Verizon within each of the above-referenced MSAs:

MSA	Total Number of Verizon Wire Centers in MSA	Included in Verizon Trigger Claim¹²⁵
Los Angeles-Long Beach-Santa Ana	74	22
Riverside-San Bernardino-Ontario	86	0
San Francisco-Oakland-Fremont	1	0
Total in all 3 MSAs	161	22

Verizon limited its evidentiary showing to actual competitive deployment of mass market switching, and elected not to present evidence relevant to “potential deployment.” Verizon witness Fulp identified trigger candidates providing service using Verizon’s mass market loops and their own switches in

¹²⁴ Verizon also claims credit for additional CLECs identified in the SBC territory, as follows: four in LA, one in Riverside and eight in San Francisco, bringing Verizon’s claimed trigger total to 11, 5, and 11, respectively

¹²⁵ Verizon’s trigger claim was made on an MSA basis. However, this count reflects the wire center count of CLECs based on Verizon workpapers. These counts reflect the impact of including cable companies as potential triggering carriers, as per Fulp Rebuttal, Attachment 5, and the impact of updating CLEC line counts as per Fulp Rebuttal, Attachment 2.

each MSA. In proposed Loop Rate Zone 1 of the LA MSA, Fulp identifies seven CLECs using Verizon mass market loops and one cable company.¹²⁶ In portions of proposed Loop Rate Zone 1 of the Riverside MSA, Fulp identifies four CLECs using Verizon loops and one cable company.¹²⁷ In proposed Loop Rate Zone 1 of the SF MSA, Fulp identifies three CLECs using Verizon loops.¹²⁸

b) Opposing Parties' Response to Verizon's Trigger Case

In similar fashion to the SBC trigger case, opposing parties argue that Verizon has failed to show that the self-provisioning trigger is met in any of its markets. Parties' challenge the Verizon case, challenging both the reliability of Verizon's underlying data and also differing with Verizon concerning the screening standards that should be applied to the trigger candidates.

Verizon changed two aspects of its original trigger analysis in its final position. Verizon has changed the line counts for four competitors that allegedly serve mass-market customers using self-deployed switches and Verizon's unbundled loops. The new line counts purportedly reflect CLEC responses to Verizon discovery. Verizon also added two cable telephony providers, Comcast and Cox, to its list of identified triggering companies and provided its own version of wire-center-level data for those companies.

MCI witness Murray was unable to verify that the revised line counts in the Fulp Rebuttal Attachment 2 correspond to the line counts provided in CLEC responses to Verizon discovery. Murray claims, however, that Verizon's new line counts are overstated because Verizon made a data entry error for one wire center. The effect of this error was to overstate the loop count in that wire center

¹²⁶ *Id.*, Attachment 3.

¹²⁷ *Id.*

¹²⁸ *Id.*

by 704 loops, which led to an equal overstatement of the loop count for the same CLEC in the Los Angeles – Long Beach – Santa Ana MSA.

Murray claims the CLEC data request that Verizon provided to MCI does not match the CLEC line counts for this company reported in the workpapers for Fulp Rebuttal Attachment 2. Time limitations prevented Murray from determining the reason for the discrepancy. Murray believes the CLEC in question may have included not just individual analog voice-grade loop counts, but also “voice-grade-equivalent” counts for larger enterprise customers. Murray bases this opinion on the fact that, in each wire center listed, the CLEC’s reported line count includes lines for several customers with more than 14 “DS0/voice-grade-equivalent access lines,” a rather high number of lines to serve at a single customer location via analog voice-grade loops. While all of these lines may be “mass-market loops,” there is no indication that Verizon attempted to verify the accuracy of this count.

Murray claims the responses received by Verizon *do not* necessarily equate to mass-market loops. One CLEC provided approximate responses to Verizon for two switches (not wire centers). The average number of voice-grade-equivalents per customer in these two switches is just under 40 in the first and well over 400 in the second. Murray finds no basis for Verizon’s conclusion that *any* of the loops that this CLEC reported are, in fact, mass-market loops. Murray was unable to investigate or verify all of the remaining CLEC line counts and associated notes in the wire-center detail underlying Fulp Rebuttal Attachment 2 because of time limitations and apparent gaps in the CLEC data responses that Verizon provided to MCI as backup for the new wire-center detail. At the wire-center level, some new line counts in Verizon’s workpapers are higher, and some lower than the line counts used in Verizon’s original trigger analysis, and are subject to the data entry errors and concerns that Murray identified.

In every instance where Verizon had reported in its original line count study that a CLEC used either one or two mass-market loops in conjunction with self-provisioned switching, Verizon's workpapers indicate that the CLEC reported no such loops. This is particularly significant because Verizon's trigger claims in two of the three MSAs (Riverside – San Bernardino – Ontario and San Francisco – Oakland – Fremont) depend on carriers that purportedly serve a single mass-market loop in the entire MSA. The carriers in question disagree with Verizon's claimed line counts, and Verizon does not appear to contest their self-reported line counts. Department of Defense (DOD) witness Lee likewise notes that two of the Riverside CLECs serve only 1 mass market line, and concludes these lines are incidental and should be removed from the analysis. This leaves only two CLECs and one cable company. These carriers have already been shown to be disqualified in connection with SBC's trigger case. For similar reasons, they do not qualify for Verizon's case.

Similarly, in the SF MSA, one of the three CLECs serves only 1 mass market line. DOD witness Lee also claims that there is no evidence that Fulp excluded CLEC lines terminating in switches deployed to serve the enterprise market. Even if all of Verizon's data were accepted, however, Lee argues that it would only demonstrate that the number of mass market lines being served over Verizon loops and CLEC switches is *de minimus*.

Five of the six trigger candidates in common between the Verizon and SBC cases for the LA MSA have the same customer profile as outlined above in connection with SBC's case. That is, Allegiance, AT&T, MCI, XO and MPower do not offer basic local service to residential customers in the MSA through the use of their own switches. Although the sixth non-ILEC carrier, Telescape, offers service to mass market customers through its switch, it is only on a *de minimus* basis. In any event, the requirement for a minimum of three qualifying carriers

has not been satisfied in the LA MSA to meet the self-provisioning trigger. The remaining company that Verizon nominated as a trigger candidate in the LA MSA is SBC Telecom, the CLEC affiliate of SBC. Although there is no record evidence to show whether SBC Telecom serves any residential customers, public statements of SBC's chairman and CEO, Ed Whitacre, indicate that the CLEC's focus is large enterprise customers. It is likely that that minority of total UNE loops that SBC Telecom attributes to the provision of service to "mass-market" customers is used to provide service to what SBC Telecom would characterize as small-business customers. Moreover, SBC Telecom is also disqualified as a valid trigger candidate by virtue of its affiliated relationship with its parent, SBC Communications. The affiliate was formed as a condition of SBC's merger agreement with Ameritech.¹²⁹ AT&T witness Economides testified that it has never been much more than a shadow company that exists for regulatory, rather than financial, reasons.¹³⁰ Staff agrees that SBC Telecom does not properly qualify as a trigger candidate.

c) Conclusions of the Staff Concerning Mass Market Switching Deployment in Verizon's Service Territory

Staff's analysis shows that the triggers are not met in any market in Verizon's service territory. In two of the three MSAs at issue, even before the application of the trigger screens, Verizon's own data do not identify any wire centers in which three or more CLECs provide service to mass-market customers. Verizon itself acknowledges that the two cable providers do not offer cable telephony in the Verizon service territory within these MSAs.

¹²⁹ Ex. 164C, Economides Testimony 1/16; 57:17-19.

¹³⁰ *Id.*, 57:19-20.

Verizon relies on the *SBC* trigger claims in the pertinent MSAs to support a finding of no impairment in Verizon's incumbent territory. Verizon inappropriately claims that trigger candidates serving only in SBC's incumbent territory can also be counted as trigger candidates in Verizon's territory. As several parties point out, the various differences in competitive conditions between the SBC and Verizon incumbent territories warrants treating each territory as part of a separate and distinct market for trigger counting purposes. For example, the two ILECs rely on completely different technology for provisioning OSS. While witness Fulp was aware of the differences, he did not consider any implications of those differences in developing his analysis of competitive deployment. Also, Verizon differs from SBC by 25% in its monthly recurring UNE-L prices. Verizon's proposed batch cut processes and costs also differ from those of SBC. Accordingly, in view of these differences, an accurate analysis of competitive switching deployment requires focusing on Verizon's service territory. Therefore, staff excludes data from those areas outside of Verizon's territory in deriving the count of competitive providers.

Even if the qualifying criteria considered above did not eliminate Verizon's trigger candidates, further questions would need to be resolved concerning the reliability of Verizon's underlying line data used to support its trigger claims, as identified by MCI witness Murray.

d) Adopted Trigger Screens Applied to Verizon Trigger Candidates

After applying the MCI trigger screens, discussed above for SBC, however, we find *no* remaining Verizon wire centers in any of the MSAs with three or more qualifying trigger candidates. Accordingly, the self-provisioning trigger is not satisfied in any market for Verizon. The table below shows the number of Verizon wire centers that have at least three UNE-L CLECs after each screen

proposed by MCI is applied.¹³¹ Murray first removed any CLEC with fewer than 5 lines in a wire center and eliminated inactive CLECs (in the “Only Active CLECs” column). These screens alone drop the wire centers in two of three MSAs from consideration because Verizon has claimed as triggering carriers CLECs with as few as one line in an entire MSA.

Murray next screened out all companies that do not offer residential service via UNE-L. After this screen was applied, no wire centers remained in which there were at least three UNE-L competitors. The second map included in Attachment TLM-R12, “Active UNE-L Providers Serving Residential Customers,” depicts the number of UNE-L CLECs remaining after this series of screens by wire center.

Although no wire centers remained with three triggering companies, Murray applied a final screen, requiring that a carrier achieve at least a 1% market share within a wire center. The third map in Attachment TLM-R12, “Active UNE-L Providers With At Least 1% Market Share that Serve Residential Customers,” shows that few wire centers remain in which there is even one CLEC that passed all of these screens.

Although Verizon has performed its trigger analysis on a “density zone within MSA” basis, Verizon provided a workpaper that listed each UNE-L CLEC that it found in each wire center and the number of mass-market loops that each CLEC serves over UNE-L in that wire center.

Murray’s analysis of the revised Verizon trigger data is summarized below.

¹³¹ Attachment TLM-R13 (proprietary) provides the results underlying the wire center deployment analysis.

**MCI Trigger Screens Applied on a Wire Center Basis for Verizon Territory
Including Claimed Cable Triggers and Updated Line Counts**

MSA	Total Number of VZ Wire Centers in MSA	Number of Verizon Wire Centers With at least 3 CLECs					
		Included in VZ Trigger Claim ¹³²	Only CLECs that Serve from their Own Switches	Only Active CLECs ¹³³	Only Active CLECs that Serve Residential	Only Active UNE- L CLECs that Serve Residential	Only Active UNE- L CLECs with ≥ 1% Market Share that Serve Residential
Los Angeles-Long Beach-Santa Ana	74	22	11	8	0	0	0
Riverside-San Bernardino-Ontario	86	0	0	0	0	0	0
San Francisco-Oakland-Fremont	1	0	0	0	0	0	0
Total in all 3 MSAs	161	22	11	8	0	0	0

Murray also evaluated Verizon's revised data under an MSA-level market analysis. The overall results of her original analysis at the MSA level are unaffected by the changes presented in the Fulp Rebuttal: (1) MCI would have screened out both cable providers; (2) MCI would have continued to screen out three of the four UNE-L providers with changed line counts because they do not serve residential customers; and (3) MCI would have screened out the remaining UNE-L provider with an increased line because it does not reach a 1% market share in the Los Angeles – Long Beach – Santa Ana MSA even with the increased line count.¹³⁴

¹³² Verizon's trigger claim was made on an MSA basis. However, this count reflects the wire center count of CLECs based on Verizon workpapers. These counts reflect the impact of including cable companies as potential triggering carriers, as per Fulp Rebuttal, Attachment 5, and the impact of updating CLEC line counts as per Fulp Rebuttal, Attachment 2.

¹³³ Excludes CLECs with fewer than five lines in a wire center, as well as CLECs that are no longer active.

¹³⁴ Murray's line count for this CLEC reflects the revised line counts in the workpapers for Fulp Rebuttal Attachment 2, with a correction for the data entry error described above.

The table below summarizes the results of the MCI screening analysis based on Verizon’s MSA-level market definition, taking into account the new data in the workpapers and supporting documentation underlying Fulp’s Rebuttal.

**Revised Results of MSA Analysis for Verizon CA Territory
Including Verizon’s Claimed Cable Triggers and Updated Line Counts**

MSA	Number of Triggering CLECs					
	VZ Trigger Claim ¹³⁵	Only CLECs that Serve from their Own Switches	Only Active CLECs with ≥ 5 Lines per VZ Wire Center	Only Active CLECs that Serve Residential	Only Active UNE-L CLECs that Serve Residential	Only Active UNE-L CLECs with ≥ 1% Market Share that Serve Residential
Los Angeles-Long Beach-Santa Ana	9	8	8	3	2	1
Riverside-San Bernardino-Ontario	2	2	2	1	1	0
San Francisco-Oakland-Fremont	2	2	1	0	0	0

III. Loops and Transport Impairment Issues

A. Overview and Background

The TRO also directed the states to make findings concerning the extent of CLEC deployment of certain specified “high-capacity loops”¹³⁶ and “dedicated transport.” High capacity loops encompass capacities greater than DS-0, and typically serve medium and large business customers. Dedicated interoffice transmission facilities (transport) encompass capacities greater than DS-0, and typically serve medium and large business customers. Dedicated transports are

¹³⁵ These counts reflect the impact of including cable companies as potential triggering carriers, as per Fulp Rebuttal, Attachment 5, and the impact of updating CLEC line counts as per Fulp Rebuttal, Attachment 2.

¹³⁶ The local loop is “a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at end-user customer premises.” 47 CFR § 51.319(a).

facilities dedicated to a particular customer or competitive carrier that it uses for transmission among incumbent LEC central offices and tandem offices.¹³⁷

Under the TRO, a “requesting carrier” would be considered to be “impaired” when lack of access to an incumbent LEC network element poses a barrier or barriers, including operational and economic barriers, that are likely to make entry into a market uneconomic.” The TRO thus considers “whether all potential revenues from entering a market exceed the costs of entry, taking into consideration any countervailing advantages that a new entrant may have.” *TRO* ¶ 84.

A local loop is the cable or wire connecting an end user’s premises to the network of its telecommunications service provider, providing the “transmission path” between the customer’s premises and one of the “central offices” in the ILEC network (or an analogous facility in a competing provider’s network).¹³⁸ A dedicated transport route is a transmission path between two incumbent LEC wire centers or switches. 47 CFR § 51.319(e). The FCC Rule elaborates that “[t]ransmission paths between identical end points (*e.g.*, wire center or switch “A” and wire center or switch “Z”) are the same ‘route,’ irrespective of whether they pass through the same intermediate wire centers or switches, if any.” *Id.*

Pursuant to the adopted schedule, SBC and Verizon each served initial testimony on loops and transport issues on November 20, 2003.¹³⁹ The ILECs supplemented their testimony on December 30, 2003, to incorporate analysis of additional data received from CLECs relating to loops and transport. Other

¹³⁷ Triennial Review Order ¶ 361.

¹³⁸ Ex. 1 (Alexander Direct (Loops)) at 4.

¹³⁹ A collaborative workshop was held on December 4, 2003, to facilitate consensus on loops and transport issues. A workshop report was issued by the Commission’s Telecommunications Division on December 11, 2003, indicated that no substantive consensus had been reached.

parties served reply testimony concerning loops and transport issues in two installments, on January 21, and February 11, 2004.

As discussed above with respect to mass market switching, the FCC vacated the TRO rules authorizing this Commission to make findings relating to nonimpairment with respect to those locations and routes where the triggers for high capacity loops and dedicated transport are met. Accordingly, we make no such findings in this report. Instead, we limit our report to a factual analysis of the extent to which deployment of high capacity loops or dedicated transport was sufficient to meet the trigger criteria. We continue to reference the trigger criteria, however, because the data were collected, organized, and evaluated in terms of the TRO trigger parameters.

B. High Capacity Loop Deployment Analysis Framework

In the TRO, the FCC made provisional findings of impairment for DS1, DS3, and dark fiber loops (*id.* ¶¶ 311, 320 & 325) but recognized there may be locations at which a requesting carrier is not impaired. Dark fiber is fiber optic strands of cable that have been deployed, but not activated or “lit” through connections to electronics (which would make the fiber capable of carrying communications). *See, e.g., TRO* ¶¶ 359, n.1097, 381.

To identify any non-impaired locations, the FCC directed the states to collect and analyze more granular evidence of loop deployment. *Id.* ¶¶ 314, 321, 327. For “high-capacity” loops, the TRO sets out criteria for identifying loop locations where competitors are deemed not to be impaired without access to UNE loops based on trigger tests to be applied to make determinations as to whether no impairment exists at particular locations.

Where the triggers are satisfied for a specific capacity level for a particular customer location, the TRO directed that a finding be made that competitors are

not impaired without access to UNE loops and/or transport at those identified locations or routes. The TRO defined a “self-provisioning trigger,” (applicable to DS3 and dark fiber loops) as a location where two or more competing carriers (unaffiliated with each other or with the ILEC) have already deployed DS 3 facilities and are serving customers via those facilities at each qualifying customer location. For purposes of assessing dark fiber loops, the self-provisioning trigger is satisfied “where two or more competing providers not affiliated with each other or the ILEC have deployed their own dark fiber at the customer location.” Thus, the dark fiber trigger does not require that the carrier be “serving customers,” since dark fiber is, by definition, not presently in use. 47 C.F.R. § 51.319(a)(5)(i)(A) & (a)(6)(1)(A). Second, the “competitive wholesale facilities trigger,” (applicable to DS3 and DS1 loops) applies to customer locations where two or more wholesale providers have deployed facilities and offer such loops on a wholesale basis to other competing providers. *Id.* § 51.319(a)(4)(ii) & (a)(5)(i)(B).

Where the triggers are not satisfied, the TRO specified that a potential deployment test then be applied on a location-specific basis to consider other evidence of whether “a requesting telecommunications carrier is not impaired without access to an unbundled loop.” *Id.* § 51.319(a)(5)(ii), (a)(6)(ii). The “other evidence” includes “alternative loop deployment at that location” as well as engineering and cost conditions that enable carriers to deploy a high-capacity loop. *Id.* § 51.319(a)(5)(ii) & (a)(6)(ii). To meet the potential deployment test of non-impairment, there can be no material or operational barriers at a customer location that preclude CLECs from economically deploying loop transmission facilities at that location at the relevant capacity level (see *TRO* ¶ 335.) Further *TRO* ¶ 206 states that “a key consideration in our impairment analysis is the loop capacity level at which a competitive entrant can recover its construction costs.”)

47 CFR sections 51.319(a)(5)(ii) and (a)(6)(ii) list several economic and operational issues that must be met to support a finding of no impairment based on the potential deployment analysis.

The following chart summarizes the applicable methods of assessing non-impairment that apply:

High-Capacity Loop Impairment Analysis

METHOD	DS1	DS3	Dark Fiber
Self-provisioning trigger		X	X
Wholesale trigger	X	X	
Potential deployment analysis		X	X

The positions of parties and Commission staff conclusions with respect to the loop triggers for both SBC and Verizon are summarized below:

	SBC	AT&T	CalTel	Pure UNE P	Sprint	Commission Staff	Verizon	AT&T	CalTel	Pure UNE P	Sprint	Commission Staff
Loop												
Self-Provisioning	196	2	0	0	0	6	14	0	7	0	0	0
DS3	196	1	0	0	0	2	1	0	0	0	0	0
Dark Fiber	196	1	0	0	0	4	13	0	7	0	0	0
Wholesale	2	0	0	0	0	0	4	0	0	0	0	0
DS1		0	0	0	0	0	4	0	0	0	0	0
DS3		0	0	0	0	0	4	0	0	0	0	0
Potential Deployment	1400	0	0	0	0	0						
DS3	1400	0	0	0	0	0						
Dark Fiber	1400	0	0	0	0	0						

1. SBC's Loops Triggers Case

a) Overview of Parties' Positions¹⁴⁰

SBC presented a triggers case for high capacity loops through the testimony of Scott J. Alexander, supported by engineering testimony of Edward Fiock and cost testimony of Scott Pearsons. SBC claims that 196 locations satisfy the self-provisioning trigger, based on competing providers' discovery responses.¹⁴¹

SBC also claims the wholesale trigger is met for DS1 loops at two locations.¹⁴² At each location, two competing providers confirmed in discovery that (i) they have deployed high-capacity loops, (ii) those loops are already being used by another carrier, and (iii) they have access to the entire building location. *Id.* Attachment SJA-4.

The CLECs claim that SBC has misapplied the high capacity loops trigger, and has thus greatly overstated the locations at which the trigger is met. The CLECs challenge the trigger claims, arguing that SBC (1) is inconsistent in treatment of gaps in CLEC information relied on; (2) makes incorrect inferences where a CLEC's response supplied some information and omitted other data;

¹⁴⁰ Several arguments made by CLEC parties concerning SBC's loop trigger case also apply to the Verizon trigger case, which are incorporated herein by reference.

¹⁴¹ These locations are set forth in Ex. 2C Attachment -2 and Ex. 137C Attachment -1. SBC identified 203 self-provisioning trigger locations in prefiled testimony. Ex. 2 at 10-11 (69 locations); Ex. 137 Attachment SJA-1 (134 locations). During the evidentiary hearing, one CLEC in a supplemental response to the Commission's data request, stated that it did not have high-capacity loops at 7 of the locations it had previously identified. (Thus, 203 - 7 = 196 locations).

¹⁴² Ex. 2 at 14-15.

(3) misuses CLEC reported capacity information; and (4) ignores CLEC reported data showing that trigger requirements have not been met.

b) Discussion of Specific Disputes Regarding Loop Trigger Application

(1) Carrier Hotels Misclassified as Customer Premises

CalTel claims that 20 of SBC's "undisputed" self provisioning trigger locations had four or more CLECs listed, raising the possibility that the locations are "carrier hotels." A "carrier hotel" is primarily a location where carriers "meet" to interconnect their systems, not to serve end users.¹⁴³ As such, locations that are in fact "carrier hotels" cannot qualify as triggers since no customers are served at those locations. Each location that SBC listed as undisputed wholesale trigger locations had four CLECs.¹⁴⁴ The existence of two wholesale providers is shown by CLEC responses to the Commission data request only with respect to DS3 capacity loops; the simple numerical trigger for wholesale DS3 loops is met for that reason, but the trigger requirement that these CLECs are offering high capacity loops on a widely available basis cannot be confirmed. (This is discussed in more detail in section (5) of this Report on operational readiness.) One location displayed two providers of DS1 capacity loops, but each of the two locations had only one identified provider of dark fiber.

CalTel witness Montgomery agrees, however, that the self-provisioning trigger is satisfied at 13 of the 71 locations that SBC identified. CalTel agrees that six (6) locations satisfy the trigger test at the dark fiber loop capacity level, and eleven (11) locations meet the trigger for CLEC self-provisioned DS3 capacity loops. Under the wholesale high capacity loop trigger, CalTel agrees that eight locations identified by SBC numerically satisfy the trigger where at least two CLECs reported data to the CPUC confirming access to all individual customer

¹⁴³ CalTel Opening Brief, at 66-67.

¹⁴⁴ Ex. 2C, Attachment SJA-4.

units or premises at the building address. (one CLEC confirmed access to each customer unit in a building at 21 of the 46 wholesale trigger locations). (See section (4) for a more in-depth discussion on access to customer locations.)

Of the eight (8) locations that CalTel agrees satisfy the wholesale trigger, one has two CLECs confirming numerical non-impairment with respect to dark fiber, eight (8) locations are confirmed by two CLEC responses regarding DS3 high capacity loops, and three (3) locations meet the minimum number of two wholesale suppliers of DS1 capacity loops. These results do not take into account the possibility of “carrier hotels” as a screen for the triggers of self-provisioned or wholesale high capacity loop locations. All of the loop customer locations CalTel witness Montgomery identified as meeting the numerical triggers may still be impaired because of conditions explicitly associated with non-impairment in the TRO for which as yet there is no adequate data.

(2) Inferences from Incomplete Data

CalTel claims that SBC and Verizon mischaracterize CLEC data. Where a particular CLEC affirmatively provided the Commission with the required data for some customer locations and routes, but left other rows blank (as the request specified should be done when the CLEC’s answer was negative), the ILECs treat the information either as “missing” or presume that the CLEC information should count toward the trigger for that location or route. CalTel argues, however, that if a CLEC was able to affirmatively provide information for some routes and locations, and not others, the correct inference is just the opposite, and that the CLEC’s “non-information” counts against the trigger.

Of the 71 loop trigger locations that SBC labeled as “undisputed,”¹⁴⁵ CalTel claims only five locations have adequate data to identify the two required self-

¹⁴⁵ SBC Supplemental testimony, Attachment SJA-2.

providers of dark fiber; while 15 other locations list just one CLEC. CalTel claims that 50 of the 71 locations fail to identify dark fiber capacity. Two providers of DS3 capacity loops appear at only 6 locations, 16 others identified only one CLEC, but 69% of the locations had no indication of capacity. At least one CLEC confirmed access to all units at only 47 locations; the other 23 locations thus cannot be confirmed to be free of impediments to access to specific customer locations for other CLECs who might need to access different parts of the location.

(3) Capacity-Specific Requirements for Loop Triggers

CLEC parties argue that the loop trigger test must be met for each specific capacity level specified in the TRO. On this basis, the CLEC parties claim that SBC has misapplied the trigger test by claiming that “Ocn” loop capacity* automatically satisfies the trigger for DS 1 and DS 3 capacity. OCn refers to the technical distinction (*i.e.*, Optical Carrier or “OC”) and the numerical variable for a range of capacities (*i.e.*, “n”) of fiber optic cable. For example, an optical carrier-level 3 — or OC3, capacity circuit is capable of transporting up to three DS3 circuits (an OC3 is approximately 155 Mbps, while three DS3s are 135 Mbps), but terminates on a different type of electronic interface. DS1 and DS3 capacity likewise refer to the technical distinction (*i.e.*, Digital Signal or “DS”). The elemental speed is a DS0, which is a voice grade line with a bandwidth of 64 Kbps. A DS1 capacity circuit contains the equivalent of 24 voice-grade or DS0 channels. A DS3 capacity circuit contains the equivalent of 28 DS1 channels or 672 DS0 channels. SBC argues that for all intents and purposes, there is no such thing as a pure standalone DS3 fiber loop, and there is no record evidence that

any DS3 loop at any of the locations at issue has not been provisioned using OCn facilities. Further, the TRO states that “attaching routine electronics, such as multiplexers [a type of optronics equipment] to high capacity loops is already standard practice in most areas” and “is easily accomplished,” is “technically feasible” and “presents no significant operational issues. (*TRO* ¶ 635.)”

Fiber optic loop facilities can operate at various levels of capacity, and the capacity of the fiber is almost entirely a function of the electronics that a carrier attaches to “light” the fiber, not something inherent in the fiber itself (*TRO* 311). Once the fiber is deployed, it is operated at a DS1, DS3, OC48 or higher level – or at all of these simultaneously...” Verizon noted that “(f)ew if any carriers deploy fiber loop facilities to accommodate only a DS1 or only a DS3 (Exhibit 11-C.) Carriers deploying fiber predominantly do so at the OCn level and channelize them to the DS1 or DS3 levels at which service is typically requested by end user customers (Exhibit 11-C and *TRO* ¶298.)

AT&T states that there is no specific evidence in the record supporting Verizon’s claim for application of the self-provisioning trigger to either the one DS3 customer location or to the 13 customer locations where Verizon says it is met for dark fiber. The only “evidence” Verizon submitted is Attachment G [to Exhibit 11-C]. That exhibit simply states [Fulp and White’s] conclusions about the data they reviewed, but does not contain any of the data itself. Accordingly, AT&T claims that there is nothing in the record to confirm these conclusions.

Staff finds that the TRO requires that the loop triggers must be met on a capacity-specific basis. *TRO* ¶ 329 expressly requires that the triggers must be “satisfied for *a specific type of high capacity* loop.” (emphasis added). Thus, while it is *technically* feasible to channelize OCn facilities to serve lower capacity levels, it may not necessarily be *economically* feasible to serve those lower loop capacity levels at a given location. The revenue stream that can be derived from serving at

each specific capacity level must be taken into account. The TRO specifically states that “a key consideration in our impairment analysis is the loop capacity level at which a competitive entrant can recover its construction costs.”¹⁴⁶ The trigger thus applies “to a particular customer location at the loop capacity level for which the state impairment analysis is being conducted.”¹⁴⁷

As noted by AT&T, counting all CLEC OCn facilities as trigger candidates would effectively preclude competitors that could only afford to serve a modest amount of capacity at that location. The existence of a CLEC using an OCn loop to serve multiple DS3 levels of demand does not prove whether a CLEC that needs less capacity could construct facilities at that location and still recover its costs. When a CLEC has provisioned three or more DS3s to the same customer location, it has provisioned an OCn-level high capacity loop to that location.¹⁴⁸ The TRO, however, did not intend for OCn loop capacity to constitute evidence of the ability to self-deploy loops at lower capacity merely because it could be channelized. For example, the TRO expressly discounted evidence that CLECs had self-deployed DS1 loops because “this evidence of self-provisioning has been possible where that same carrier is already self-provisioning OCn or a DS3 level of loop capacity to that same customer location. Thus, *this evidence does not support the ability to self-deploy stand-alone DS1 capacity loops* nor does it impact our DS1 impairment finding.”¹⁴⁹

It is apparent from this excerpt that the FCC did not intend for all OCn facilities to count toward the self-provisioning trigger merely because they can be channelized. Accordingly, we shall not count OCn facilities as automatically

¹⁴⁶ TRO ¶ 206.

¹⁴⁷ TRO ¶ 332.

¹⁴⁸ Tr. Vol. 51 1/26; 7703:1-8.

¹⁴⁹ TRO ¶ 325 n. 957 (emphasis added).

meeting the self-provisioning loop trigger for DS3 or Dark Fiber. The trigger for each respective capacity level requires evidence of actual deployment on a capacity-specific basis. Because a CLEC can only purchase a maximum of two DS3s as a loop UNE under the TRO rules, it is thus reasonable to interpret the trigger as requiring CLECs deployment of two DS3 circuits of capacity. We shall accordingly adopt this capacity-specific standard for applying the self-provisioning trigger. In this manner, the trigger is met at the same level of capacity that would otherwise be available on a UNE loop basis.

AT&T argues that the self-provisioning trigger is met for Dark Fiber loops only at Location No. 118 (in SJA-2). Even here, AT&T claims the evidence is unclear because the CLECs deploying dark fiber also indicate they provide no retail services to customers across the fiber, suggesting that the dark fiber was part of a nonimpaired deployment of OCn facilities.

(4) Requirement for Access to Every Customer at Customer Location

CalTel argues the self-provisioning trigger must consider whether a CLEC can access only certain floors of a building—but not all floors—or is able to access common space, house and riser cable, and other building wiring that the ILEC accessed in the monopoly environment (Exhibit 187 at 11). The Pure UNE-P Coalition argues that being “operationally ready” to provide service means that CLECs have access to every customer at a specific location (*TRO* ¶ 305 and 328.)

CalTel further claims that 36 of 47 wholesale loop trigger locations SBC classified as an “open question” lacked data as to whether a potential provider had access to each individual unit in the building. However, the 71 other customer loop locations SBC categorized as “undisputed” in meeting the self-provisioning trigger also exhibit large gaps in the data CLECs reported in answer

to the Commission's data request.¹⁵⁰ CalTel claims the same end result applies to the 500 transport routes for which SBC seeks non-impairment findings based on "potential deployment."

SBC and Verizon both argue that the self-provisioning trigger does not require self-providers to have access to the entire customer location to which their facilities are deployed, even though the wholesale trigger does impose such a requirement. They reference 47 C.F.R. section 51.319(a)(4)(ii). SBC states that for "each of the locations at issue, two competing providers confirmed through discovery that they have access to the entire building location (see Exhibit 2 attachment SJA-4). Verizon claimed that it "only counted a wholesale trigger candidate towards the wholesale trigger if it has access to the entire customer location, either from the responses to the commission's data or the reasonable assumption that a carrier with fiber optic facilities into a large commercial building has access to the entire building. In reviewing Exhibit 11-C at 20, Verizon "assumes" that the carriers have access. Staff concludes that while the wholesale loop trigger requires that carriers have access to the entire customer location to which facilities are deployed, there is no such requirement for the self-provisioning loop trigger. However, staff cannot rely on a mere assumption as a substitute for factual evidence. Thus, in order for a location to be eligible as a wholesale loop trigger candidate, data must be included in the record clearly confirming that candidate has access to the entire customer location.

(5) Operational Readiness

Wholesalers must be operationally capable of providing high capacity service (see 47 CRF 51.319(a)(4)(ii) and (a)(5)(i)(B), and Exhibit 187 at 17-18.

TRO ¶ 338 states that "...there should be some reasonable expectation that these

¹⁵⁰ Ex. 2C, Attachment SJA-6.

providers are operationally capable of continuing to provide wholesale loop capacity to that customer location.” As a requirement of that operational readiness, the CLEC parties argue that wholesalers must have OSS in place to ensure effective preordering, ordering, provisioning, etc. (See *TRO* ¶ 337 and 338.)

Another requirement of operational readiness is accessibility of collocation space in an ILEC wire center for cross-connection. Pure UNE-P argues that wholesale facilities that are not readily available for cross-connection are neither “widely available” nor an “equivalent wholesale loop product” as required by *TRO* ¶ 337. AT&T argues that just because a CLEC provides wholesale services of some kind, somewhere, says nothing about whether it provides a specific service to a specific location on a wholesale basis (see Exhibit 190-C at 6:19-21.) Thus, AT&T, CalTel and Pure UNE-P claim there is no evidence that any of the carriers identified by SBC or Verizon meet these TRO loop wholesale trigger requirements.

SBC and Verizon disagree, stating that according to 47 CRF §§ 51.319(a)(4)(ii) and (a)(5)(i)(B), unlike the wholesale trigger for transport, the wholesale trigger for loops does not require the CLEC to be operationally ready to provide high capacity loop service on a wholesale basis. SBC notes that the rule does not require “any particular level of OSS, and in fact, an analysis of OSS would be contrary to the FCC’s intent that the triggers be easy to administer.” Further, SBC states, “the loop wholesale trigger rule does not require collocation or cross connection. However, these requirements are seen and specifically noted in the rule for the competitive wholesale trigger for dedicated transport (see 47 CFR §§ 51.319(e)(1)(ii)(C)(D) and (e)(2)(i)(B)(3)(4) and (e)(3)(i)(B)(3)(4).)” For all of the reasons above, both SBC and Verizon argue that none of the locations should be subjected to these requirements.

TRO ¶ 338 explicitly requires a “reasonable expectation that these providers are operationally capable of continuing to provide wholesale loop capacity to that customer location.” The cited references (*TRO* ¶¶ 337,338) do not define operational capability, however, nor make mention of an OSS requirement. Staff finds no explicit evidence that OSS is required for a wholesale carrier to be operationally capable. Additionally, the CLECs also reference in *TRO* ¶ 337, the requirement for collocation space in an ILEC wire center that can be readily accessed for cross-connection. Again, nothing in ¶ 337 can be interpreted as a requirement for collocation space readily accessed for cross-connection. The ILECs have presented a case for wholesale loop triggers that assumes a carrier’s provision of some kind of wholesale service anywhere qualifies it as a wholesale loop trigger candidate. Staff finds that while the CLECs are unfounded in their interpretation of operational readiness requiring OSS in place, the ILECs are equally unfounded in assuming that because a carrier provides some kind of wholesale service anywhere it qualifies as a wholesale trigger candidate.

(6) Offering Service on a Widely Available Basis

The TRO requires that claimed wholesalers offer wholesale high capacity loops to the specific customer location on a widely available basis (see 47 CFR §§ 51.319(a)(4)(ii)(A) and (a)(5)(i)(B)(1). SBC maintains that the carriers identified at the two locations for which SBC seeks a finding of non impairment have already confirmed through discovery that they are providing wholesale loop service at those particular customer locations.¹⁵¹ “Further, these carriers advertise their wholesale offerings on their publicly available web sites.” (See Exhibit 1 Attachments SJA-3, SJA-5 and SJA-7)

¹⁵¹ Exhibit 2, Attachment SJA-4.

AT&T, CalTel, Pure UNE-P and Sprint, however, contend that neither SBC nor Verizon provided information proving that these services are offered to the specific customer location on a widely available basis.

In reviewing Exhibit 2, Attachment SJA 4, staff concludes that both locations have at least two carriers responding affirmatively that they offer wholesale loop service. However, in reviewing Exhibit 11-C, Attachments G, J, L, and M, staff finds no evidence that any carriers are providing wholesale loop service at a particular customer location. Only one of the two nominated CLECs indicated that it has access to the entire building and has customers that actually provide services to the building using the wholesaler's facilities. Simply demonstrating that a company has at least one wholesale customer does not indicate that the wholesale service is widely available.¹⁵² Thus, staff does not find evidence that the trigger candidates are offering service "on a widely available basis." This requirement for wholesale loop trigger eligibility is not met.

(7) Requirement for Wholesaler to Offer Cost-Based Rates

AT&T, CalTel, and Pure UNE-P all agree that in order to be operationally ready to provide wholesale loops on a widely available basis, a trigger candidate must offer service at cost-based rates and reasonable, non-discriminatory terms and conditions.¹⁵³ Pure UNE-P references rule 47 CFR § 51.319(a)(4)(ii) and (a)(5)(i). AT&T CalTel, and Pure UNE-P contend that neither SBC nor Verizon provided information in the record regarding a trigger candidate's rates, terms or conditions.

¹⁵² Exhibit 187 at 9-10.

¹⁵³ TRO ¶ 329 and 337.

SBC and Verizon claim that the TRO has no requirement that a wholesaler trigger candidate must offer service at cost-based rates and reasonable, non discriminatory terms and conditions. 47 CFR §§ 51.319(a)(4)(ii) and (a)(5)(i)(B). Thus, neither SBC nor Verizon provided information regarding a trigger candidate's rates, terms or conditions.

Staff concludes that that wholesale triggers for loops do not require that a wholesaler offers high cap loops at cost-based rates and non-discriminatory terms and conditions. The CLECs base their argument on *TRO ¶¶* 329, 337 and on 47 CFR section 51.319(a)(4)(ii) and (a)(5)(i). These provisions mention nothing on this subject. The other two references refer to “alternative transmission technology providers” or “intermodal carriers” not CLECs. Thus, information regarding a trigger candidate's rates, terms or conditions is not required.

c) Conclusion

Staff disagrees with the ILEC's claim that the presence of an OCn loop equates to a showing that DS1 or DS3 loop capacity deployment. As such, we disqualify those locations that merely show OCn capacity. Further, staff agree that because a CLEC can only purchase a maximum of two DS3s as a loop UNE under the TRP rules, the self-provisioning trigger for DS3 loops can only be met if two or more unaffiliated competitive carriers have deployed no more than two DS3 loops at a specific customer location.

Staff reviewed Ex. 2C, Attachment SJA-2, the locations listed by SBC as undisputed locations meeting the self-provisioning trigger. Staff deleted all references to carriers that noted that its high capacity loops are OCn facilities. Staff then reviewed the list to determine whether the carrier confirmed the deployment of one or two DS3 circuits to that specific location and that the circuit served that specific customer location. Staff also reviewed the initial list

for dark fiber to determine that the carrier confirmed deploying dark fiber to that location and that at least one fiber is serving the customer location.

Staff concludes that the self-provisioning trigger for DS3 loops is satisfied at two location within the SBC service territory, as identified by number code corresponding to SBC witness Alexander's testimony: # 47 and 83. Staff also concludes that the self-provisioning trigger for Dark Fiber has been satisfied at the following four locations: #33,38, 52, and 118. Staff does not find that the self-provisioning trigger has been met at any of the other locations claimed by SBC.

Staff reviewed Ex. 2C, SJA-4, the SBC list of two undisputed locations meeting the wholesale trigger. Staff found two carriers that confirmed the deployment of DS3 circuits serving the specific customer location. In both cases, the number of DS3 circuits serving the customer location exceeded the 2 DS3 level. Staff concludes that no locations satisfy the wholesale loop trigger within the SBC territory.

2. SBC's Potential Deployment Analysis for High Capacity Loops

a) Positions of Parties

SBC claims that the TRO criteria are satisfied for another 1,414 high capacity loop locations based on its potential deployment analysis.¹⁵⁴ Opposing parties disagree, claiming that no locations satisfy the potential deployment test.

For the potential deployment criteria to be met, the TRO (at § 335) requires that "no material economic or operational barriers at a customer location [that] preclude competitive LECs from economically deploying loop transmission facilities to that particular customer location at the relevant loop capacity level." The TRO requirements for the potential deployment analysis for DS3 and dark

¹⁵⁴ For the specific customer locations (or "buildings"), see Attachment 16 to Alexander's supplemental testimony and Attachment 2 to Alexander's testimony in support of SBC's motion.

fiber loops call for the following factors to be considered for each specific location for which a potential deployment claim is made:

“evidence of alternative loop deployment at that location; local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs; and availability of similar quality/reliability alternative transmission technologies at that particular location.”¹⁵⁵

SBC’s potential deployment analysis focused only on locations that: (1) fall within dense urban wire centers and (2) are within 300 feet of existing fiber facilities in those urban wire centers where there is already evidence of existing alternative deployment where one or more alternative carriers have already placed fiber facilities in most of the main streets or rights-of-way. Within the 300-foot corridors, SBC selected only business and government locations with an estimated telecommunications “spend” of \$50,000. SBC claims that such existing facilities constitute the best evidence that CLECs generally do not face any “material economic or operational barriers” in loop deployment. Where such fiber facilities are already in place, SBC argues it is only a matter of extending a short “lateral” facility to connect the existing “backbone” in the middle of the street to a building that adjoins that street. (SBC Opening Brief at 162, Exhibit 139 (Fiock) at 11.)

SBC relied on information from an independent third party data base regarding locations of competitors’ fiber optic facilities and the identities of the related carriers to determine which customer locations satisfy one or both

¹⁵⁵ See 51.319 (a)(5)(ii), for DS3 loops, and (a)(6)(ii), for dark fiber loops.

triggers. SBC analyzed loop locations on an aggregate basis for its potential deployment analysis, rather than on a separate building-by-building basis. SBC claims that a building-by-building inquiry is impractical and unnecessary because the relevant factors do not vary in a meaningful way from building to building within identified corridors. (Exhibit 139 (Fiock) at 7.)

SBC witness Edward V. Fiock, Engineering Manager, testified that none of the factors identified by the FCC create a material barrier to a competing carrier's potential deployment of its own DS3 or dark fiber loop facilities to any of the building identified in witness Alexander's testimony. SBC claims that none of the other factors listed in the TRO potential deployment analysis have any impact on the qualifying locations it has identified. SBC thus claims that for the 1414 locations identified, the potential deployment test is met concerning "whether all potential revenues from entering a market exceed the costs of entry, taking into consideration any countervailing advantages that a new entrant may have." *TRO* ¶ 84.

b) Issues in Dispute Regarding SBC Potential Deployment Analysis of Loops

(1) Lack of Location-Specific Analysis

CLEC parties argue that SBC did not conduct a building-specific potential deployment analysis with respect to high capacity loops. Sprint claims there is no factual basis, however, to conclude that all of the potential deployment locations identified by SBC are virtually equivalent, or that deployment costs will be the same at every location. The FCC required location-specific review of locations where CLECs might not be impaired. Accordingly, Sprint argues that the analysis cannot end simply because a location meets a particular revenue threshold. Based on Sprint's experience, SBC's estimated construction cost does

not fully account for all of factors needed to accurately estimate whether construction costs could be recovered. (Sprint Opening Brief at 51-52.)

The record shows little or no detailed information about each potential deployment location identified by SBC. Sprint argues that a site-specific review is required of the revenue potential, the cost of construction, the time of construction, rent, and maintenance at each location in order to demonstrate continuing impairment. Sprint proposes that the number of locations be narrowed using different assumptions for revenue and cost.

AT&T and Pure UNE-P likewise claim that SBC's assumption of 300 feet as part of a generic analysis of costs oversimplifies the analysis and does not follow the rules as outlined in 47 CFR §§ 51.319(a)(5)(ii) and (a)(6)(ii). AT&T points out that the Commission is to consider 'evidence of alternative loop deployment *at that location*,' not 'evidence of alternative loop deployment *close by* (see *TRO ¶ 335*.)" 47 CFR sections 51.319(a)(5)(ii) and (a)(6)(ii) identify the total cost of building and providing service, the cost of underground or aerial laying of fiber or copper, the cost of equipment needed for transmission, and the costs of installation and other items necessary in setting up the service, and building access restrictions and costs as items specifically included as part of the potential deployment analysis. Both AT&T and Pure UNE-P argue that these items must be specifically considered.

SBC argues that its approach of analyzing the cost of building a lateral by a carrier that already has fiber located within 300 feet of a customer location "captures the standard industry practice." Most carriers deploy fiber backbones down the main arteries of urban areas and then later fill in with short laterals to surrounding buildings at relatively low costs. (See Exhibit 139 at 11.) On this basis, SBC argues that the costs associated with deploying a 300-foot lateral reflect actual market practice. Yet, even if we accept that this is standard

industry practice, SBC witness Alexander's supporting testimony fails to provide sufficient detail to identify any specific carriers that has fiber running within 300 feet of any of the customer locations.¹⁵⁶ Thus, we cannot verify SBC's claim that it has properly identified locations that meet the 300-feet criterion.

¹⁵⁶ Tr. Vol. 66 / Alexander; 10309:28-10311:14.

(2) SBC Construction Cost Estimates Underlying Potential Deployment Analysis

SBC witness Fiock relied on the Cambridge study¹⁵⁷ to develop revenue figures of CLEC loop deployment estimates for the cost of extending a 500-foot DS3 loop. Fiock estimated the cost to be approximately \$130,000. Ex. 2, Attachment SJA-19, at 21. Witness Fiock relied on the \$130,000 cost estimate in reaching his conclusions concerning the feasibility of potential deployment. Fiock characterized the \$130,000 cost estimate as conservative (Exhibit 139 at 30). By comparison, the Cambridge estimate is also above the estimated cost of \$20,690 that AT&T presented to the FCC (and is presenting to this Commission) as the cost of a 500-foot loop. Ex. 191-C, Attachment AG-1 and Attachment B, at 4.

Using this \$130,000 estimate, the study applies a financial investment model (to recover capital costs, annual operating costs, and the desired rate of return) to calculate \$44,000 as the approximate annual revenue a CLEC would require to recover the cost of loop deployment. Exhibit 2, Attach SJA at 19.

Although utilizing the Cambridge study, SBC rejected certain costs developed in that study, including building access fees, construction permitting, and the construction itself, claiming that such costs were too high. Ex. 134-C, at 33, n. 24. However, the analysis that SBC provided in Exhibit 2 Attachment SJA-19 does contain local engineering costs of building and utilizing facilities, underground or aerial laying of fiber or copper, equipment needed for transmission, and installation and other necessary costs involved in setting up

¹⁵⁷ The US Telecom Association submitted the Cambridge study to the FCC in the reply comment phase of the *TRO* proceeding, to show the economics of building a fiber lateral to one location off of a carrier's main fiber route. *See* Ex. 134-C, at n. 26.

service. But these were localized costs for areas such as Tucson, Arizona and Seattle, WA.

Sprint witness Daniel R. Gordon claimed that the cost of construction assumed in SBC's potential deployment analysis could be 32% higher than SBC claims, based upon Kent Dickerson's review (Exhibit 134 Attachment KWD-1) of the Cambridge study (Ex 135 at 4:21 – 5:1). Footnote 644 of the TRO states that the cost of construction could be as high as \$250,000 for the lateral.¹⁵⁸ Sprint argues that these differences in the cost estimates show that the cost of building a lateral will be highly varied and complex. The Cambridge Study notes that "labor costs vary widely from market to market, directly affecting both fiber installation costs and customer premise labor and setup costs." (Exhibit 2, Attachment SJA-21.)

Staff concludes that the estimate of \$130,000 offered by SBC is not sufficiently granular to apply to each building location.

(3) Validity of Estimates of Available Revenue Per Carrier

SBC claims that all of its identified locations offer estimated annual telecommunications revenue well above the \$44,000 Cambridge threshold. SBC thus characterizes its minimum estimated revenue or "spend" per building of \$50,000, and the "spend" at most buildings, as being well above the \$44,000 figure, as estimated by TNS Telecoms. Ex. 2 (Alexander Supp. (Loops)) at 27-28.

Sprint disagrees with SBC's assumed fixed revenue spend of \$50,000 per location. Because the cost of constructing a lateral will vary by location, Sprint argues, the revenue required to recover the cost of the lateral will also vary by location. Thus, the process of applying a fixed amount of revenue or cost to a list

¹⁵⁸ TRO, Footnote 644.

of potential locations, Sprint argues, should only be used to identify locations needing more detailed analysis to prove lack of impairment under the potential deployment test. Further, once the shorter list of possible locations is identified by applying a realistic revenue threshold, Sprint argues that the burden is on the ILEC to prove how each individual location meets the potential deployment test, and that competitors can recover the costs of building these locations in a timely manner, even though competitors have not built to the locations in sufficient numbers to satisfy the other triggers.

The TRO states that the locations are considered impaired unless the ILEC can prove otherwise.¹⁵⁹ Sprint argues that the best evidence of non-impairment is whether competitors have actually built facilities and are competing. Sprint further argues that the only means of determining the economic viability of deployment by two competitors is to conduct a location-specific analysis.

Even if the average revenue at each identified location is assumed to be sufficient to support the ILEC and the deployment of loop facilities by two competitors based on averages, location-by-location analysis could reveal barriers that have prevented the competitors from building at that location. The assumed average revenue may still not be sufficient to spur competitive loop deployment for various reasons. The location owners may impose high rents or requirements that will lead the competitor to choose not to build. Moreover, to bring a lateral into a customer location, a conduit or a pole must be present. Space must be available in the location for the fiber optic terminal equipment; and the CLEC must have access to the building wiring in order to connect the fiber optic terminal equipment to the customer premises wiring. Ex. 134-C, at 36-

¹⁵⁹ TRO ¶¶ 311 and 320.

37. Rights-of-way access may not be easily obtained or the cost of doing so might be prohibitive.

If additional conduit or other facilities are required, the CLEC must obtain additional construction and rights-of-way permits, requiring additional time and expense. Ex. 134-C, at 36-37. If conduit is not available, the construction itself may require traversing numerous utility lines such that the cost of doing so overwhelms any benefit. The location may not support additional competitors either through lack of space or inadequate access to the location's wiring. SBC overlooked these variables in its potential deployment analysis.

Sprint argues that identification of customer locations based on any particular revenue threshold should not be considered sufficient for evaluating potential deployment, but only as a starting point for a more detailed review. The TRO specifically states that each location must be reviewed on its own merits to demonstrate that competitors are not impaired.¹⁶⁰

Staff concludes that SBC's \$50,000 estimate of the "spend" at each location is not a reliable basis for making findings of potential deployment. SBC's estimates were based on a national survey, rather than being California specific (let alone site-specific. The witness did not know how many, if any, of the businesses surveyed were located in California.¹⁶¹ SBC did not ascertain on a

¹⁶⁰ TRO ¶ 328 states, "In making affirmative impairment findings on a nationwide basis for dark fiber, DS3 loops, and DS1 loops, we recognize that limited alternative deployment has occurred at particular customer locations not specified in our record for certain of these high-capacity loop types which could lead to a finding of no impairment for that loop type at that location. Thus, for these loop types, a more granular impairment analysis should be applied on a customer-by-customer location basis."

¹⁶¹ *Id.* 10234:24-26.

location-specific basis whether prospective alternative fiber providers have sufficient fiber in their networks to serve the locations SBC identified.¹⁶²

SBC assumed that CLECs can obtain equipment and cable as cheaply as SBC does. Yet, ILECs are able to purchase materials at greater volume discounts than CLECs are able to obtain. Ex. 134-C (Dickerson), at 35. SBC also failed to consider how differences in items such as manhole locations, building terminal room set-up, and innerduct placement will affect the cost estimate for building to a specific location. Ex. 139-C (Fiock), at 7; Ex. 134-C(Dickerson), at 37.

SBC's assumption of a \$50,000 "spend" also ignores the potential decline in potential revenue available to a second competitor at the same location. Assuming that two CLECs build at a given location, the annual stream of \$50,000 revenue would have to be split three ways, yielding only \$16,667 per carrier (i.e., $\$50,000/3 = \$16,667$). Thus, assuming SBC's \$50,000 figure is a sufficient revenue stream for one carrier, Dickerson argues that a stream of three times this amount, or \$150,000 would be required at each location to accommodate the minimum three providers under the potential deployment test.

Yet even \$150,000 is an unrealistically low threshold to support three carriers at a single location. Witness Dickerson offered an alternative estimate, based on the Cambridge Study, of at least \$205,000 (as shown in Exhibit 134-C, Attachment KWD-1). Dickerson's proposed \$205,000 revenue threshold is offered by Sprint as a minimum estimate required for a location, but it still is not enough to satisfy the potential deployment criteria. Also, Sprint claims the Cambridge study is not adequate to predict location-specific costs to construct new fiber laterals. Locations that meet the requirement for number of carriers with fiber in reasonable proximity and sufficient annual revenue to support three

¹⁶² Ex. 134-C (Dickerson), at 42-43.

carriers should only be the starting point. A location-specific review would be required to prove non-impairment.

c) Conclusions Regarding SBC's Potential Deployment Case for Loops

SBC has failed to provide location-specific facts about the amount of conduit available, the availability of rights-of-way and the associated expenses, rent figures, and availability of space for equipment at each location, or if not available, a construction estimate. Also lacking are facts about contractual limitations the location owners may impose on the competitors that may be a barrier based on the topography about each location. Sprint calls for calculation of location-specific revenues to prove that revenues are indeed sufficient to support multiple carriers, and that customers at these potential deployment locations that represent the revenue opportunity are not under long-term contracts so that the revenues are indeed available to the deploying CLECs.

SBC instead has only made broad-based assumptions about the ease with which CLECs could deploy their facilities. Without such evidence, we find insufficient basis to find that the potential deployment test has been met. Thus, since the number of competitors required to meet self-deployment or wholesale triggers are not present at these locations, the remaining locations do not satisfy the potential deployment test.

SBC has not shown how the minimum number of providers – two CLECs and the ILEC—can build into the locations nor how the revenue is sufficient to support at least three providers with no other barriers preventing the CLECs from building to the locations.

SBC's potential deployment analysis relies upon broad assumptions that do not take into account the specific variations that would apply on a route-specific analysis. The *TRO* ¶ 335 requires that the potential deployment analysis

“consider various factors affecting the ability to economically deploy *at that particular customer location*.” (emphasis added). SBC’s generalized assumptions fail to consider location-specific factors that could affect the potential deployment, including obtaining nondiscriminatory access to rights of way. Moreover, assumptions regarding the cost of laying 300 feet of fiber do not inform us as to the cost of a CLEC building a new loop to a specific customer location, which would be required for potential deployment to be realized. SBC’s analysis of the revenue derived from potential deployment doesn’t take into account the specific revenue to be generated from specific levels of capacity, as the TRO requires.

As noted above, the TRO requires that a potential deployment analysis consider, among other things, “local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs.” SBC claims that “there are no local topographical concerns, such as hills or rivers, that would preclude competitive carriers from deploying DS3 or dark fiber loops within the narrow 300-foot corridors addressed here.” SBC Opening Brief, at 166 (*citing* Ex. 139, at 22-23.) SBC has failed to consider the FCC-identified barriers to deployment, including the costs of constructing around specific local topography, the impact of municipal right-of-way requirements and the availability and sufficiency of telecommunications equipment for each nominated customer location. Ex. 134-C, at 39-41. SBC admitted that such factors would be unique to a location, even though claiming that such factors do not create any barriers to entry. Ex. 139-C, at 22; SBC Opening Brief, at 167.

3. Verizon's Self-Provisioning Trigger Case for Loop Deployment

a) Overview of Verizon's Case

Verizon claims that for DS 3 loops, one customer location meets the self-provisioning trigger. For dark fiber, Verizon claims that 13 customer locations satisfy the self-provisioning trigger.¹⁶³ Verizon claims that four customer locations meet the DS1 and DS 3 wholesale triggers.¹⁶⁴ Verizon only counted as wholesale trigger candidates those carriers that had access to the entire customer location. Verizon based its analysis both on responses to Commission data requests and its own judgment. Verizon identified carriers that hold themselves out as wholesale providers on their websites or through tariffs on file with the Commission. Based on their advertisement or tariff provisions indicating a willingness to provide their loop facilities to other carriers, Verizon inferred that certain carriers are providing (or willing to provide) various levels of wholesale capacity (including DS 1 and DS 3).

b) Position of CLEC Parties Regarding Verizon Loop Trigger Case

CalTel claims that none of the customer locations identified by Verizon can be viewed as nonimpaired based on the evidence presented by Verizon. CalTel witness Montgomery testified that only 7 of the 13 loop locations identified by Verizon satisfy the self-provisioning trigger for dark fiber loops, and that none of the DS3 and DS 1 locations qualify as a self-provisioning trigger. Montgomery claims that Verizon has shown neither the existence of the required number of carriers deployed at each location at the specific capacity level involved, nor the required building access. Likewise, CalTel claims that Verizon failed to prove

¹⁶³ See Ex. 11-C, at 14, Attachment G: Verizon Fulp/White Supplemental Direct Testimony, based upon CLEC responses to Commission discovery.

¹⁶⁴ Ex. 11-C, Attachment G: Fulp/White Supplemental Testimony.

that the four identified customer locations meet either the DS1 or DS 3 wholesale trigger. CalTel argues that Verizon merely bases its claim on several unproven assumptions.

AT&T likewise argues that the Verizon loop trigger showing is not capacity-specific, and as such, does not meet the evidentiary standard required by the TRO. AT&T states that there is no specific evidence in the record supporting Verizon's claim for application of the self-provisioning trigger to either the one DS3 customer location or to the 13 customer locations where Verizon says it is met for dark fiber. The only "evidence" Verizon submitted is Attachment G to Exhibit 11-C. That exhibit simply states {Fulp and White's} conclusions about the data they reviewed, but does not contain any of the data itself. Accordingly, AT&T claims that there is nothing in the record to confirm these conclusions. Staff concludes that no locations satisfy the wholesale loop trigger within the Verizon territory.

Staff likewise find that Verizon has not satisfied the self-provisioning trigger at any location either at the DS 3 level or the Dark Fiber level.

c) Dedicated Transport Impairment Framework

(1) Overview

The TRO also found that CLECs are impaired on a nationwide basis without access to unbundled dark fiber, DS1, and DS3 dedicated transport facilities. *TRO* ¶ 359. The FCC recognized that competing carriers may self-provision dedicated transport facilities or obtain them on a wholesale basis from carriers other than the incumbent LEC. State commissions were to undertake a granular analysis of carrier data to identify specific routes that meet either of two prescribed transport triggers. The trigger analysis is designed to show where CLECs are already providing non-ILEC dedicated transport facilities.

The self-provisioning trigger is met for dark fiber and DS3 transport facilities if, on a particular route, at least two unaffiliated competing carriers use their own interoffice transport facilities, and at least one additional carrier is willing to provide transport facilities at wholesale. *Triennial Review Order* ¶ 408, n.1264. Each provider must be “operationally ready” to use those transport facilities to provide DS 3 transport along that route, and each provider’s facilities must “terminate at a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises. Leased “dark fiber” has similar requirements, except that operational readiness is not required. Dark fiber is considered to be that carrier’s own fiber for purposes of the self-provisioning trigger. If the carrier has attached its own electronics to activate leased dark fiber at a DS3 level, the activated fiber is also considered the carrier’s own. *TRO* ¶ 408.

Under the *wholesale* trigger, competing carriers are found not to be impaired without access to the ILEC’s transport facilities if there are “two or more alternative transport providers, not affiliated with each other or the incumbent LEC, immediately capable and willing to provide transport at a specific capacity along a given route between incumbent LEC switches or wire centers.” *Triennial Review Order* ¶ 400. The wholesale trigger applies to dark fiber, DS1, and DS3 interoffice transport facilities available from other carriers on a *wholesale* basis. Dark fiber leased from a carrier other than the incumbent LEC, and then offered on a wholesale basis, is considered to be the buying carrier’s own dark fiber. Similarly, dark fiber obtained as a UNE from Verizon counts as the buying carrier’s own fiber if that carrier attaches its own electronics and offers the activated fiber at wholesale. *Triennial Review Order* ¶ 414 n. 1277.

As with loop deployment, a potential deployment test applies for transport routes to consider other evidence of the “existence of facilities-based

competition” among other factors for specific routes that do not meet the trigger test. For any dedicated transport routes where the potential deployment test is satisfied, a finding of non-impairment is required. The specific factors to be addressed in analyzing potential deployment for dedicated transport are generally identical to those previously enumerated for high capacity loops.

The chart below summarizes the types of dedicated transport at issue, and the analyses of non-impairment that apply in each case.

Dedicated Transport Impairment Analysis

METHOD	DS1	DS3	Dark Fiber
Self-provisioning trigger		X	X
Wholesale trigger	X	X	X
Potential deployment analysis		X	X

The following chart summarizes parties’ positions concerning transport triggers.

\ Number of Routes Claimed to Meet Transport Triggers

	SBC	AT&T	CalTel	Pure UNE P	Sprint	Commission Staff	Verizon	AT&T	CalTel	Pure UNE P	Sprint	Commission Staff
Transport												
Self-Provis	151	0	0	0	0	0	109	0	0	0	0	0
DS3	151	0	0	0	0	0	40	0	0	0	0	0
Dark Fiber	151	0	0	0	0	0	69	0	0	0	0	0
Wholesale	500	0	0	0	0	0	116	0	0	0	0	0
DS1	500	0	0	0	0	0	116	0	0	0	0	0
DS3	500	0	0	0	0	0	116	0	0	0	0	0
Dark Fiber	500	0	0	0	0	0	116	0	0	0	0	0
Deployment	500	0	0	0	0	0						
DS3	500	0	0	0	0	0						
Dark Fiber	500	0	0	0	0	0						

C. Dedicated Transport

1. SBC's Transport Triggers

a) SBC's Transport Self-Provisioning Trigger Case

SBC claims that the self-provisioning trigger for dedicated transport has been satisfied on 151 routes: 125 in the Los Angeles area, 19 in the San Francisco area, and 7 in San Diego.¹⁶⁵ Attachment SJA-2 to Mr. Alexander's Supplemental Testimony (Ex. 4) summarizes the results of SBC's analysis, presenting the central offices on each end of the identified transport routes, and the competing providers that have deployed transport facilities along those routes.

With respect to transport, while competing carriers control their transport facilities, SBC owns the central offices at either end of each transport route. Thus, SBC maintains records in the ordinary course of business showing which

¹⁶⁵ SBC identified 161 self-provisioning trigger routes in its direct and supplemental testimony. Ten routes, all in Los Angeles, were withdrawn because collocation of one of the trigger carriers was not confirmed by discovery or by physical inspection.

carriers have already established and connected fiber transport facilities to “collocation arrangements” at SBC central offices. SBC used these records to identify transport routes that had a sufficient number of competing providers connected at both central office end points to satisfy the applicable triggers. Given (1) that competing carriers do not spend the time and money to deploy fiber for no purpose, but instead to connect a central office to their network, and (2) that the FCC’s rule defines a transport route by its central office end points, irrespective of the physical path or intermediate facilities in between, SBC argues that these transport connections provide sufficient *prima facie* evidence of the presence of competing transport facilities at the critical endpoints that define a given route.

As explained by witness Alexander, the CLECs identified for each route on Attachment SJA-2 fall into one of four categories: They either (a) confirmed that they provided dedicated transport along the specified route; (b) acknowledged that they had fiber collocations at each end of the route, but denied providing dedicated transport; (c) deny having fiber collocations at one end of the route or the other; or (d) had not responded to discovery.¹⁶⁶

b) SBC Wholesale Trigger Case for Transport

SBC claims 500 routes satisfy the wholesale transport trigger, based on the presence of at least two unaffiliated alternative wholesale providers.¹⁶⁷ SBC’s analysis of deployment and operational readiness are largely the same for both the wholesale and the self-provisioning triggers. SBC interprets the FCC’s self-provisioning trigger as not excluding wholesale providers, but applying

¹⁶⁶ Ex. 4C, (Alexander) at 12:22-13:5.

¹⁶⁷ SBC presented evidence on 502 routes in its opening testimony (Exhibit 4C, Attachment SJA-4.) Two routes in Los Angeles (route numbers 128 and 129) were withdrawn based on further analysis in SBC's supplemental testimony.

whenever a carrier has “deployed transport facilities” and is “operationally ready to use those facilities” to provide dedicated transport, without specifying *to whom* such transport is to be provided.

The self-provisioning trigger applies wherever “three competing carriers have self-provided transport facilities on that route (*irrespective of whether they make available wholesale capacity*)” and that “the self-provisioning trigger may be satisfied on a route by a combination of carriers’ facilities that were self-deployed to provide wholesale transport to other carriers and facilities self-deployed by carriers to serve their own needs.” *TRO ¶¶ 387 n.1200 & 408 n.1264.*

c) SBC Potential Deployment Analysis for Transport Routes

SBC applied the potential deployment test only for the same routes already identified under its application of the self-provisioning and wholesale triggers. To the extent the Commission finds that the “trigger” routes identified by SBC do not meet the applicable trigger criteria, at a minimum, SBC claims that the potential deployment test is still satisfied for those routes. SBC argues that the competing providers have already overcome potential obstacles, including obtaining necessary rights of way, overcoming local topographical concerns, deploying fiber optic facilities, and collocating in the applicable central offices. SBC argues that these providers have already considered the appropriate customer density and market factors, made a decision to deploy fiber along the routes, and carried out that decision. Ex. 4 (Alexander Supp. (Transport)) at 32, 34, and 35. Accordingly, SBC seeks a finding of non-impairment with respect to DS3 and dark fiber transport for the routes it has identified, as noted above.

2. Verizon’s Transport Trigger Case

Verizon claims that 69 transport routes meet the criteria for the self-provisioning trigger for dark fiber, and that for DS3 capacity, the self-

provisioning trigger has been satisfied for 40 transport routes. With respect to the wholesale trigger, Verizon claims that 116 transport routes qualify at the DS1 and DS3 capacity levels, and that those 116 transport routes also qualify for dark fiber.¹⁶⁸ Verizon applies the transport triggers to routes located in the Los Angeles LATA (730).

Verizon states that the vast majority of competing carriers that have deployed fiber transport facilities for their own use have indicated in public statements and filings that they will lease those facilities to other carriers. For this reason, based on the criteria used to identify which carriers offer transport facilities at wholesale, Verizon claims that the same pairs of Verizon wire centers that meet the self-provisioning trigger also meet the wholesale trigger. Verizon applied the following process to identify carriers offering transport on a wholesale basis, with related capacities at which those facilities are offered.

- If a carrier holds itself out as a wholesale provider on its website — and does not limit its representation to particular routes — Verizon identified the carrier as a wholesale provider.
- Carriers that supply transport facilities to Universal Access, Inc. are wholesale providers, and Verizon identified them as such. Universal Access is as a broker of transport services, and is a certificated carrier in all of Verizon's territories, including California. *All* carriers that sell transport facilities to Universal Access are selling to another carrier, and, therefore, are appropriately considered wholesale providers. In addition, Universal Access indicates in its website materials that many of its customers are carriers, further supporting Verizon's conclusion that Universal Access' suppliers are wholesale providers.

¹⁶⁸ Fulp/White Supplemental Testimony (Ex.11 C) at 3; see also Attachments C and D.

- Verizon identified a carrier as a wholesale provider if it is listed in the *New Paradigm CLEC Report 2003* as offering dedicated access transport, unless the offering is limited to particular routes, and unless the carrier indicates that it will not provide its dedicated access transport to other carriers. The New Paradigm Resources Group (“NPRG”), which prepared the *New Paradigm CLEC Report*, provides, among other things, business planning advice to CLECs. NPRG reports that it gets information from the CLECs themselves, and provides these carriers with the opportunity to provide direct input on coverage.

Most of the carriers that Verizon has identified as offering wholesale meet more than one of these criteria. In addition, a number of the carriers that Verizon has identified as wholesale providers have filed competitive access tariffs in California. Verizon argues that the burden is on competing carriers to demonstrate that a specific route is not available at wholesale capacity. Absent such specific evidence, Verizon argues that a carrier’s general willingness to offer its facilities on a wholesale basis and treat all carriers’ transport facilities as available for leasing at wholesale is sufficient to qualify it for the trigger.

Verizon assumes that a carrier that has deployed fiber transport facilities and is willing to provide transport over those facilities to other carriers is providing (or is willing to provide) various levels of capacity at wholesale, including dark fiber, DS1, and DS3. This assumption is supported by public evidence, including tariffs and website materials.¹⁶⁹

a) Discussion of Specific Disputes Regarding Transport Triggers

CalTel claims that CLEC responses to the Commission’s data request confirmed non-impairment in only 5 of the transport routes identified by SBC in the Los Angeles LATA, or one percent (1%), and confirmed the existence of one

¹⁶⁹ Copies of the relevant pages of website materials are filed as Attachment D of Fulp’s testimony.

CLEC transport alternative for another 27% of these routes. Every route identified by SBC had at least one CLEC whose response to the Commission was, in fact, actually missing, and the missing data accounted for 27% of all the CLEC-route appearances identified by SBC in LA (Exhibit 187 (Montgomery) at 39.)

For about 33% of the LA LATA transport routes that SBC said were non-impaired, CalTel argues that one or more of its numerical trigger candidates should have been excluded because the relevant data indicated that the CLEC does not operate an end-to-end transport “route” between the ILEC wire centers, just a “link” to its own point of presence. (*Id.*)

Finally, CalTel claims that 259 of SBC’s alleged “non-impaired” transport CLEC-routes identified a CLEC’s response to the Commission data request as being “missing,” when the CLEC had affirmatively responded to the request. The CLEC did identify actual transport facilities between SBC wire centers on eight routes and SBC counted these responses as being confirmed. But SBC nevertheless inferred that data for another 259 routes was “missing” rather than conceding that no actual facilities could be identified for the CLEC on the particular transport path. *Id.*

SBC applied the same approach to another CLEC in its non-impairment list of transport routes in the San Francisco LATA. This CLEC provided affirmative responses to the Commission’s data request confirming in nine instances that it did have actual transport facilities between the wire center pairs that SBC identified by counting collocation arrangements. But where the CLEC did not confirm that it had actual transport facilities between SBC wire centers, SBC labeled the CLEC’s data as “missing.”

With respect to transport routes outside of the LA LATA, CalTel agrees that 16 of the transport routes SBC identified can be confirmed as non-impaired (with two wholesale providers per transport route) by CLEC responses to the

Commission data requests. CalTel agrees that 10 of these routes in the San Diego LATA meet the numerical aspect of the wholesale transport trigger, but opposes their being counted because the ILECs submitted no data to demonstrate that requesting carriers have access to collocation and cross connections both in each connected ILEC wire center and from another separate set of arrangements. Another 29% of SBC's trigger candidates' routes outside Los Angeles have one confirmed transport trigger strictly in terms of the CLECs' facility count reported to the Commission. *Id.* at 41.

In addition, the data SBC relies upon to identify transport route triggers outside the Los Angeles LATA also has route-specific data missing for 36% percent of the transport routes identified. *Id.*

AT&T notes that only nine of the transport routes identified by SBC confirmed that they provide dedicated transport. Even along these routes, there is no evidence that all three CLECs are providing 12 or fewer DS3s of transport along the route, or that fiber facilities deployed terminate at both ends of the route, both in SBC's wire center and a nearby, non-SBC facility.

CalTel believes that only 8 of the 26 routes that Verizon identified show data identifying two or more CLECs; while 11 others had data for only one CLEC. CalTel claims that Verizon mischaracterized CLEC data as missing when in fact the CLEC had affirmatively confirmed some transport facilities in responding to the Commission's data request and left other route information blank, as required. Verizon included facilities that a CLEC had identified only as links, not an end-to-end transport route. These latter two errors affected 39 out of 72 CLEC-route appearances in the Verizon November 20 submission and affected all but one of its identified transport routes. Also, like SBC, Verizon has no data indicating whether or not any of its transport routes meet the requirement that requesting carriers must have access to collocation and cross

connections both in each connected ILEC wire center and from another separate set of arrangements.

b) Capacity-Specific Identification of Triggers

CalTel claims that only three of the 116 transport routes identified by Verizon meet the basic numerical competitive self-provisioning trigger, but argues that they cannot be counted as triggers because no record evidence establishes that any requesting carrier could access the specific transport routes in question by collocation and cross-connection arrangements that are not located in the ILEC wire center, and no record evidence confirms that the alleged wholesalers are operationally ready to provide transport along the route and have offered it on a widely available basis (Exhibit 188 at 5 – 6). CalTel argues that the trigger analyses fail to delineate among different types of service and facility capacities, and do not separately identify at each customer location the specific capacity of the loops counting towards the self-provisioning trigger, but rely upon aggregated averages. *Id.* at 4.

CLECs reporting only dark fiber transport (leaving the DS1 and DS3 columns on the data request form blank) are treated by Verizon as having fully equipped, operationally ready and in-service transport routes. Verizon states that a fiber optic cable has virtually unlimited capacity to carry information, as limited only by the attached optronic equipment used to transmit traffic along the cable.¹⁷⁰ Dedicated transport does not require that a physically distinct *facility* (e.g. a strand of cable) be devoted to a particular customer or purpose, but is provided by assigning electronically a portion of the capacity on that facility. Under standard industry practice, and as described in the discussion on loop triggers, carriers can “channelize” their OC transport facilities to provide DS3

¹⁷⁰ Ex. 3 (Alexander), at 18-19.

transport – or several DS3 transport circuits at once – using commercially available equipment.¹⁷¹ Verizon thus argues that on this basis, transport facilities provided over fiber optic cable at the “OCn” capacity level are operationally ready at the DS 3 level.

In identifying trigger candidates, Verizon likewise assumes that when competing carriers deploy fiber and attach OCn electronics (*e.g.*, OC48 multiplexers), they then channelize the OCn system into the lower transport levels required by their customers, including DS3s and DS1s. Verizon argues that as long as the carrier has an optical-level facility that can be “channelized” into DS3 and DS1 capacity facilities, the FCC’s trigger is satisfied.¹⁷² Sprint argues that such an interpretation conflicts with the TRO’s requirement for capacity-specific showings for each transport route. Verizon claims that fiber transport facilities are *capable* of operating at various levels of capacity, and that fiber capacity is almost entirely a function of the electronics that a carrier attaches, not something inherent in the fiber itself. *TRO* ¶ 372 Once the fiber is deployed, it is operated at a DS1, DS3, OC48 or higher level — or at all of these levels simultaneously — simply by changing the electronics.

Verizon likewise assumes that self-provisioned fiber optic transport facilities carry individual DS3 circuits — unless a carrier shows, for a particular route, that it is not carrying DS3 circuits over its fiber facility. Verizon claims that standard industry practice is for competing carriers deploying fiber optics to build OCn level transport facilities that are capable of channelization to DS1 or DS3, and that few, if any carriers, deploy transport facilities to accommodate *only* a DS1 or *only* a DS3. *TRO* ¶¶ 386, 391. The FCC stated in the *TRO* ¶ 382: “The

¹⁷¹ Tr. Vol. 51, 7699-7700 (Alexander). *See also* Ex. 4 (Alexander).

¹⁷² Exhibit 1, p. 10.

record indicates that when competing carriers self-deploy transport facilities, they often deploy fiber optic facilities that are activated at OCn levels.” AT&T reports that it, along with “most carriers, including incumbent LECs,”¹⁷³ generally constructs its interoffice transport networks at an OC48 capacity. Verizon’s interoffice transport facilities likewise are generally built at an OC48 capacity.

CalTel argues, however, that CLEC deployment of an OCn facility to a building indicates nothing about whether it would be *economical* for a CLEC to deploy merely a loop with one or two DS-3 circuits of capacity. The self-deploying CLEC may have far more volume at a building than could be handled by one or two DS-3 circuits. As a result, deployment of an OCn loop does not address whether a CLEC who had the prospect of only one or at most two DS-3 circuits worth of traffic would also find it economical to build to that location. Only the presence of two self-provisioning CLECs who have built one or two DS-3 loops will satisfy the capacity requirement for loops.

Likewise, CalTel argues, CLEC self-deployment of a transport facility with capacity of OC48, for example, says nothing about whether the impairment case is overcome for a CLEC that wants only 12 DS-3 circuits worth of capacity. Because the FCC has already removed CLECs’ ability to ask for OCn UNE loops, CalTel argues that it is irrelevant whether CLECs have self-deployed OCn UNE loops, but that loop or transport facilities meet the trigger only if they match, and are limited to, the capacity limits for the UNE itself.

c) Dark Fiber Capacity

Verizon claims that all self-provisioned transport facilities almost certainly have dark fiber. Dark fiber is fiber optic cable “that has not been activated

¹⁷³ TRO ¶ 372, n.1144.

through connections to optronics that light it, and thereby render it capable of carrying communications.” *TRO* ¶ 381. All fiber transport facilities, regardless of the capacities at which they now operate, once consisted entirely of dark fiber. Verizon thus argues that evidence of “lit” fiber automatically is evidence that a carrier self-provisions dark fiber (Verizon Opening Brief at 109-111.)

Verizon also claims that the vast majority of self-provisioned fiber transport facilities have spare fibers. Verizon argues that no carrier would incur the “large fixed and sunk costs required to self-provision fiber transport facilities,” including the costs of obtaining rights of way, digging up the streets and attaching cable to poles, and deploying the fiber, without leaving even a single strand of dark fiber. Fiber transport facilities are always installed with extra fiber to meet projected demand growth. Furthermore, fiber cables are commonly manufactured and deployed in increments of 12 fiber strands (i.e., 12, 24, 48, etc., fibers per cable) (Exhibit 10-C at 18.)

Sprint witness Kent W. Dickerson took issue with the ILEC assumption that any provider of “lit” fiber facilities automatically is a provider of dark fiber.¹⁷⁴ Dickerson testified that each fiber cable segment in any network will have varying amounts of spare fibers, with sometimes no spare cross-sections. Spare sections may also form a “bottle-neck” where no adjoining cable segments are available to connect them beyond a building entrance facility. Yet, for dark fiber to be available, it must extend for the entire route for which a carrier seeks to lease facilities. Thus, we cannot simply assume that an offering of lit fiber automatically translates into an offering of dark fiber at the same location.

¹⁷⁴ Sprint/ Dickerson Rebuttal 1/21/04.

**d) Characterization of Entrance Facilities as
“Dedicated Transport”**

In their analysis of dedicated transport facility deployment, the ILECs assume that transport routes exist between each and every collocation arrangement for a given carrier, without regard for the carrier’s actual use of the collocation arrangement. CalTel argues, however, that dedicated transport is limited, by definition, to transport between two points within the ILEC’s network. Conversely, a CLEC that extends its network by building facilities connecting one of its switches (or transport node) to a collocation in an ILEC’s central office has therefore not constructed “dedicated transport” as the FCC now defines that term, but rather an entrance facility.

In this regard, CalTel argues there are severe consequences to using entrance facilities – which do not qualify as UNEs – to meet the self-provisioning trigger for dedicated transport. The harm is especially acute for CLECs that require a facility between the identified ILEC end offices for the purpose of obtaining an EEL or for engaging in transport “hubbing” in order to gain sufficient scale to construct their own facilities. A finding that the self-provisioning transport trigger is met solely because three or more CLECs provide entrance facilities to the same set of incumbent offices would denied competitors access to dedicated transport on that route, and would impair their ability to use EELs to support additional facilities construction. Because collocations are generally not used to provide transport connectivity between ILEC wire center pairs, CalTel argues, this “connect-the-dots” approach drastically overstates the number of actual transport routes connecting wire centers and cannot be used to support transport trigger claims.

Verizon interprets “a ‘route’ to include one that may connect ILEC wire centers or switches that are not directly connected to each other.” *TRO* ¶ 402,

n.1246. Thus, if a pair of Verizon wire centers meets either of the FCC's two triggers, Verizon concludes that competing carriers are not entitled to unbundled access to Verizon's dedicated interoffice transmission facilities that directly or indirectly connect that pair of wire centers.

If a carrier has operational fiber in two Verizon wire centers in the LA LATA, Verizon assumes that the carrier has a transport route between those wire centers. In Verizon's experience, when carriers in its territories deploy their own fiber transport facilities, they typically deploy fiber optic rings connecting to their points-of-presence (or "POPs") in the LATA and various customer premises, in addition to connecting to Verizon's wire centers. Verizon assumes that all CLECs with two collocations in Verizon facilities who also have constructed fiber rings can essentially provide transport from every Verizon wire center to every other Verizon wire center and to all parts of the carriers' network.¹⁷⁵ Therefore, if there are fiber-based facilities in two Verizon wire centers in a LATA, Verizon assumes that those facilities are part of a CLEC-operated ring and that traffic can be routed from one wire center to the other. Verizon also assumes that these CLEC-operated fiber rings connect to the CLEC's POP, and that traffic can flow to and from all parts of the carrier's network through the POP.

In a diagram produced in Fulp's testimony, Verizon illustrates how both incumbent LECs and CLECs typically connect to Verizon wire centers using dedicated interoffice transport. In the diagram, three carriers have dedicated interoffice transport on operational fiber between their collocation arrangements in Verizon Wire Centers A and B. Each of these carriers has dark fiber transport facilities, and each has channelized their facilities to provide DS3 and DS1 level services.

¹⁷⁵ Exhibit 1, p.15.

Verizon argues that the FCC's self-provisioning trigger is met in this example because CLECs 1, 2, and 3 have deployed their own operational fiber with dark fiber and DS3 level services on the route between Verizon Wire Centers A and B.

Sprint disagrees. Sprint witness Gordon¹⁷⁶ offered an illustrative example to support its claim that end-to-end routes cannot be assumed based merely on collocations at central office when a carrier may actually own or lease via a long-term IRU only *portions* of a specific route. For example, a carrier could build facilities from its collocation site into the manhole just outside the ILEC central office, but not own or control the entire interoffice segment of the route between the manholes under a long-term IRU lease. Even if three different CLECs had collocations in two ILEC wire centers with their own fiber in and out of the collocation site into the first manholes, the three CLECs may not have a lease fiber on an IRU basis from the same wholesale provider for the interoffice transport *between* the manholes, as illustrated in the diagram below:



Source: Diagram from Ex. 134 at 17.

The staff concludes that the analysis presented by Sprint witness Gordon is persuasive. As illustrated by Sprint Diagram example above, simply relying on collocations and fiber going in and out of each wire center could lead to the faulty conclusion that all three CLECs had found it to be technically and economically feasible to self-provision end-to-end transport between ILEC wire

¹⁷⁶ Daniel R. Gordon adopted the written testimony of Kent W. Dickerson.

centers. Under TRO requirements, dedicated transport must constitute a path between two ILEC central offices with no switching interposed along that path.¹⁷⁷ SBC cites 51.319(e) as describing a dedicated route as one that may “pass through one or more intermediate wire centers or switches.” Although SBC identified pairs of central offices where collocation exists, it did not document whether each of the paths between those collocations involve switched transport, in which case the path would not be “dedicated.” Neither SBC nor Verizon presented evidence regarding whether the claimed self-provider facilities serve the entire route from beginning to end. These links, which CLECs affirmatively identified in responses to the Commission data request, do not constitute transport routes as defined by the TRO. One or two CLECs have indicated that they do not typically use the fiber that may exist between two collocations at ILEC wire centers to transport traffic between those wire centers (see Exhibit 187 at 33-34 and 11-C at 6.)

e) Operational Readiness: Transport Case

To count toward either of the triggers, the transport facility must be “operationally ready to provide transport into or out of” Verizon’s wire centers, *i.e.*, the carrier’s collocation facility must be provisioned and powered, and its fiber must have been pulled into the collocation arrangement. *Triennial Review Order* ¶ 406, nn.1256, 1257. Verizon claims that the evidence from physical inspections shows that the transport facilities that it has identified as meeting one or both of the triggers both meet the FCC’s definition of being “operationally ready” and use fiber optics.

The TRO states that “[c]ollocation may be in a more traditional collocation space or fiber can be terminated on a fiber distribution frame.” *TRO* ¶ 406,

¹⁷⁷ TRO ¶ 365, see also Ex. 3, Alexander Testimony; 4:19-23.

n.1257. Over the course of several months during the summer of 2003, Verizon conducted physical inspections of *all* collocation arrangements included in this triggers case. Inspectors checked each collocation facility in those Verizon wire centers to verify that there is powered equipment in place (*i.e.*, it is operational), and that the collocating carrier had non-Verizon fiber optic cable that both terminated at its collocation facility and left the wire center.

Verizon applied controls to ensure the reliability of these data, including (i) supervision by the director in charge of provisioning collocation throughout Verizon, (ii) written procedures for each step of the inspection process, (iii) standard forms that were filled out by each inspector, (iv) signed statements by the inspectors verifying the accuracy and reliability of the information provided and the inspector's compliance with the written procedures, and (v) signed statements by each inspector's supervisor confirming that the inspector followed the appropriate procedures. A collocation arrangement is included in Verizon's triggers case *only* if, through this process of inspection and verification, it was found to be operational and to have non-Verizon fiber. Verizon assumes that fiber transport facilities deployed by other carriers are used for DS1 and DS3 transport.

f) CalTel's Response to Verizon's Transport Case

CalTel believes that only 8 of the 26 routes that Verizon identified show data identifying two or more CLECs; while 11 others had data for only one CLEC. CalTel claims that Verizon mischaracterized CLEC data as missing when in fact, the CLEC had affirmatively confirmed some transport facilities in responding to the Commission's data request and left other route information blank, as required. Verizon included facilities that a CLEC had identified only as links, not an end-to-end transport route. These latter two errors affected 39 out

of 72 CLEC-Route appearances in the Verizon November 20 submission and affected all but one of its identified transport routes. Also, like SBC, Verizon has no data indicating whether or not any of its transport routes meet the requirement that requesting carriers must have access to collocation and cross connections both in each connected ILEC wire center and from another separate set of arrangements.

g) Conclusions

Staff concludes from *TRO* ¶ 414 that “competitive transport providers must be operationally ready and willing to provide the particular capacity transport on a wholesale basis along the specific route.” Further, footnote 1278 referred to a letter that asserted that, “the Commission should ensure that competitive fiber providers are able to extend facilities into incumbent central offices and establish a presence in that central office that will permit ready and economical access to competing carriers.” However, staff also concludes that operational capability is not defined in the TRO and therefore does not include an OSS requirement.

Based on *TRO* ¶ 400, 412 and 414, staff concludes that the wholesale dedicated transport trigger must be satisfied by two or more unaffiliated competing providers. Further, staff concludes that 47 CFR 51.319(e)(1)(ii), (e)(2)(i)(B) and (e)(3)(i)(B) requires that the competing provider be willing to provide that DS1, DS3 or dark fiber dedicated transport on a widely available basis. Staff concludes that the routes identified by SBC where the carrier has confirmed that they are competitive wholesale providers of transport fulfill this specific requirement of the trigger. Staff reviewed the assumptions made by SBC in Exhibit 4-C regarding the likelihood of carriers providing wholesale transport but cannot consider these assumptions as sufficient evidence. Regarding the

routes that Verizon has identified in Exhibit 11-C as meeting the dedicated transport wholesale trigger, staff has found no evidence in the record that explicitly states whether a specific carrier is willing to provide dedicated transport on a widely available basis.

Based on the record of evidence, staff has concluded that no route meets the requirements for any of the dedicated transport route trigger at any capacity level.

List of Appendices

Appendix 1: Maps Showing Distribution of UNE-L CLEC Switch Deployment in SBC Service Territory

- a. Distribution of UNE-L CLECs by Wire Center and MSA Boundaries
- b. Distribution of UNE-L CLECs Serving Residential Customers
- c. Distribution of UNE-L CLECs with at least 1% Market Share Serving Residential Customers

Appendix 2: Maps Showing Distribution of UNE-L CLEC Switch Deployment in Verizon Service Territory

- a. Distribution of UNE-L CLECs by Wire Center and MSA
- b. Distribution of UNE-L CLECs Serving Residential Customers
- c. Distribution of UNE-L CLECs With at least 1% Market Share Serving Residential Customers

Appendix 3: Matrix Showing Applicability of AT&T Proposed Screening Criteria to CLEC Trigger Candidates for the SBC Service Territory

Appendix 4: Matrix Showing Applicability of AT&T Proposed Screening Criteria to CLEC Trigger Candidates for the Verizon Service Territory